



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

```
1  GGACACTGAC  ATGGACTGAA  GGAGTAGAAA  GCTGGAGTGA  CACTGCAGTG
51  GGCTTCTCCG  TAGCCCCAGC  CTTCAGGCTG  CGCAGCCCCT  AACCTGCCGG
101 CACCGCTTTT  GGGGAAGCAGC  TTGGCTCTTC  CATCTCCCCA  AGCCTTCCTC
151 TCCATCCTTT  CATCCACCCC  TCGCCGATCT  TACTTTTCT  TTTACCCACG
201 GGGCCGCGGC  CGGCCACCCC  CTGGCCGGTG  CAAACACCCA  AGCCCTCTCC
251 AGTTCTCCCC  CAAGCTAATA  TTTTCCCACC  TGTCTTTTTC  TGGGGTTTCT
301 CCACGAGCCA  GTCCAAGGCT  CCCCATCCT  CGGAAATTGT  TTTGTTGGAC
351 TGCTAAACCG  AGGCGTGTAA  AGCTTGAGGA  CTTTATTATT  ATTTGGGTTT
401 TTTTCATTTC  TTCCCTTCT  GGGCAACGAA  GCAATGAAAT  TTCCAATCGA
451 GACGCCAAGA  AAACAGGTGA  ACTGGGATCC  TAAAGTGGCC  GTTCCCGCAG
501 CAGCACCGGT  GTGCCAGCCC  AAGAGCGCCA  CTAACGGGCA  ACCCCCGGCT
551 CCGGCTCCGA  CTCCAACCTC  GCGCCTGTCC  ATTTCTCCC  GAGCCACAGT
601 GGTAGCCAGG  ATGGAAGGCA  CCTCCCAAGG  GGGCTTGCA  ACCGTCATGA
651 AGTGGAAGAC  GGTGGTTGCC  ATCTTTGTGG  TTGTGGTGGT  CTACCTTGTC
701 ACTGGCGGTC  TTGTCTTCCG  GGCATTGGAG  CAGCCCTTTG  AGAGCAGCCA
751 GAAGAATACC  ATCGCCTTGG  AGAAGGCGGA  ATTCCTGCGG  GATCATGTCT
801 GTGTGAGCCC  CCAGGAGCTG  GAGACGTTGA  TCCAGCATGC  TCTTGATGCT
851 GACAATGCGG  GAGTCAGTCC  AATAGGAAAC  TCTTCCAACA  ACAGCAGCCA
901 CTGGGACCTC  GGCAGTGCC  TTTTCTTTGC  TGGAACGTG  ATTACGACCA
951 TAGGGTATGG  GAATATTGCT  CCGAGCACTG  AAGGAGGCAA  AATCTTTTGT
1001 ATTTTATATG  CCATCTTTGG  AATTCCACTC  TTTGGTTTCT  TATTGGCTGG
1051 AATTGGAGAC  CAACTTGGAA  CCATCTTTGG  GAAAAGCATT  GCAAGAGTGG
1101 AGAAGTCTT  TCGAAAAAAG  CAAGTGAGTC  AGACCAAGAT  CCGGGTCATC
1151 TCAACCATCC  TGTTCACTTT  GGCCGGCTGC  ATTGTGTTTG  TGACGATCCC
1201 TGCTGTCAAT  TTTAAGTACA  TCGAGGGCTG  GACGGCCTTG  GAGTCCATTT
1251 ACTTTGTGGT  GGTCACCTCT  ACCACGGTGG  GCTTTGGTGA  TTTTGTGGCA
1301 GGGGAAACG  CTGGCATCAA  TTATCGGGAG  TGGTATAAGC  CCCTAGTGTG
1351 GTTTTGGATC  CTTGTTGGCC  TTGCCTACTT  TGCAGCTGTC  CTCAGTATGA
1401 TCGGAGATTG  GCTACGGGTT  CTGTCCAAAA  AGACAAAAGA  AGAGGTGGGT
1451 GAAATCAAGG  CCCATGCGGC  AGAGTGGAAG  GCCAATGTCA  CGGCTGAGTT
1501 CCGGGAGACA  CGGCGAAGGC  TCAGCGTGGA  GATCCACGAT  AAGCTGCAGC
1551 GGGCGGCCAC  CATCCGCAGC  ATGGAGCGCC  GGCGGCTGGG  CCTGGACCAG
1601 CGGGCCCACT  CACTGGACAT  GCTGTCCCC  GAGAAGCGCT  CTGTCTTTGC
1651 TGCCCTGGAC  ACCGGCCGCT  TCAAGGCCTC  ATCCAGGAG  AGCATCAACA
1701 ACCGGCCCAA  CAACCTGCGC  CTGAAGGGGC  CGGAGCAGCT  GAACAAGCAT
1751 GGGCAGGGTG  CGTCCGAGGA  CAACATCATC  AACAAAGTTC  GGTCCACCTC
1801 CAGACTCACC  AAGAGGAAAA  ACAAGGACCT  CAAAAAGACC  TTGCCCAGAG
1851 ACGTTTCAGAA  AATCTACAAG  ACCTTCCGGA  ATTACTCCCT  GGACGAGGAG
1901 AAGAAAGAGG  AGGAAACGGA  AAAGATGTGT  AACTCAGACA  ACTCCAGCAC
1951 AGCCATGCTG  ACGGACTGTA  TCCAGCAGCA  CGCTGAGTTG  GAGAACGGAA
2001 TGATACCAC  GGACACCAA  GACCGGAGC  CGGAGAACA  CTCATTACTT
2051 GAAGACAGAA  ACTAA (SEQ ID NO:1)
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FIGURE 1A



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**FEATURES:**

5'UTR: 1 - 433  
Start Codon: 434  
Stop Codon: 2063  
3'UTR: 2066

**HOMOLOGOUS PROTEINS:**

Top 10 BLAST Hits:

			Score	E
gi 10863961 ref NP_066984.1	potassium channel, subfamily K, me...	1054	0.0	
gi 8452900 gb AAF75132.1 AF196965_1 (AF196965)	potassium channe...	1037	0.0	
gi 6754432 ref NP_034737.1	potassium channel, subfamily K, mem...	486	e-136	
gi 5712621 gb AAD47569.1 AF129399_1 (AF129399)	TREK-1 potassium...	483	e-135	
gi 9622335 gb AAF89743.1 AF171068_1 (AF171068)	two-pore domain ...	483	e-135	
gi 4101566 gb AAD01203.1  (AF004711)	two-pore potassium channel...	473	e-132	
gi 7705562 ref NP_057695.1	potassium inwardly-rectifying chann...	318	9e-86	
gi 6680540 ref NP_032457.1	potassium channel, subfamily K, mem...	309	4e-83	
gi 9988112 emb CAC07336.1  (AL136087) dJ137F1.2 (novel member o...		201	2e-50	
gi 4504851 ref NP_003731.1	potassium channel, subfamily K, mem...	180	4e-44	

BLAST to dbEST:

	Score	E
gi 3400036 /dataset=dbest /taxon=9606 ...	293	6e-77

**EXPRESSION INFORMATION FOR MODULATORY USE:**

library source:

Expression information from BLAST dbEST hit:

gi|3400036 Human testis

Expression information from PCR-based tissue screening panels:

Human bone marrow  
Human colon  
Human fetal brain  
Human fetal heart  
Human fetal liver  
Human heart  
Human kidney  
Human pancreas  
Human testis

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MAY 06 2003  
TECH CENTER 1600/2900

FIGURE 1B



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1 MKFPPIETPRK QVNWDPKVAV PAAAPVCQPK SATNGQPPAP APTPTPRLSI  
51 SSRATVVARM EGTSQGGLOT VMKWKTVAI FVVVVVYLVT GGLVFRALQ  
101 PFESSQKNTI ALEKAEFLRD HVCVSPQELE TLIQHALDAD NAGVSPIGNS  
151 SNNSSHWDLG SAFFFAAGTVI TTIGYGNIAF STEGGKIFCI LYAIFGIPLF  
201 GFLLAGIGDQ LGTIFGKSIA RVEKVFRKKQ VSQTKIRVIS TILFILAGCI  
251 VFVTIPAVIF KYIEGWTALE SIYFVVVTLT TVGFGDFVAG GNAGINYREW  
301 YKPLVWFVIL VGLAYFAAVL SMIGDWLRVL SKKTKEEVGE IKAHAAEWKA  
351 NVTAEFRETR RRLSVEIHDK LQRAATIRSM ERRRLGLDQR AHSLDMLSPE  
401 KRSVFAALDT GRFKASSQES INNRPNNLRL KGPEQLNKHG QGASEDNIIN  
451 KFGSTSRLTK RKNKDLKCTL PEDVQKIYKT FRNYSLDEEK KEEETKMCN  
501 SDNSSTAMLT DCIQQAHALE NGMIPTDTKD REPENNSLLE DRN (SEQ ID NO:2)

#### FEATURES:

##### Functional domains and key regions:

[1] PDOC00001 PS00001 ASN\_GLYCOSYLATION  
N-glycosylation site

Number of matches: 7

1	149-152	NSSN
2	152-155	NNSS
3	153-156	NSSH
4	351-354	NVTA
5	483-486	NYSL
6	503-506	NSST
7	535-538	NNSL

[2] PDOC00004 PS00004 CAMP\_PHOSPHO\_SITE  
cAMP- and cGMP-dependent protein kinase phosphorylation site

361-364 RRLS

[3] PDOC00005 PS00005 PKC\_PHOSPHO\_SITE  
Protein kinase C phosphorylation site

Number of matches: 12

1	7-9	TPR
2	45-47	TPR
3	7-9	TPR
4	45-47	TPR
5	51-53	SSR
6	105-107	SQK
7	331-333	SKK
8	359-361	TRR
9	376-378	TIR
10	410-412	TGR
11	455-457	TSR
12	459-461	TKR

[4] PDOC00006 PS00006 CK2\_PHOSPHO\_SITE  
Casein kinase II phosphorylation site

Number of matches: 8

1	125-128	SPQE
2	155-158	SHWD
3	267-270	TALE
4	334-337	TKEE
5	416-419	SSQE
6	469-472	TLPE
7	485-488	SLDE

## FIGURE 2A



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8 537-540 SLLE

[5] PDOC00008 PS00008 MYRISTYL  
N-myristoylation site

Number of matches: 8

1	62-67	GTSQGG
2	66-71	GGLQTV
3	148-153	GNSSNN
4	167-172	GTVITT
5	212-217	GTIFGK
6	290-295	GGNAGI
7	440-445	GQGASE

**Membrane spanning structure and domains:**

Helix	Begin	End	Score	Certainty
1	81	101	2.130	Certain
2	165	185	1.764	Certain
3	193	213	2.281	Certain
4	244	264	2.380	Certain
5	275	295	1.436	Certain
6	310	330	2.210	Certain

FIGURE 2B





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**BLAST Alignment to Top Hit:**

>gi|10863961|ref|NP\_066984.1| potassium channel, subfamily K, member  
10 [Homo sapiens] >gi|10198115|gb|AAG15191.1|AF279890\_1  
(AF279890) 2P domain potassium channel TREK2 [Homo  
sapiens]  
Length = 538

Score = 1054 bits (2697), Expect = 0.0  
Identities = 526/526 (100%), Positives = 526/526 (100%)  
Frame = +1

Query: 52 VAVPAAAPVCQPKSATNGQPPAPAPTPTPRLSISSRATVVARMEGTSQGGGLQTMKWKT V 231  
Sbjct: 13 VAVPAAAPVCQPKSATNGQPPAPAPTPTPRLSISSRATVVARMEGTSQGGGLQTMKWKT V 72

Query: 232 VAIFVVVVVYLVTGGLVFRALQPFESSQKNTIALEKAEFLRDHVCVSPQELETLIQHAL 411  
Sbjct: 73 VAIFVVVVVYLVTGGLVFRALQPFESSQKNTIALEKAEFLRDHVCVSPQELETLIQHAL 132

Query: 412 DADNAGVSPIGNSSNNSSHWDLGSAFFAGTVITTIGYGNIA PSTEGGKIFCILYAIFGI 591  
Sbjct: 133 DADNAGVSPIGNSSNNSSHWDLGSAFFAGTVITTIGYGNIA PSTEGGKIFCILYAIFGI 192

Query: 592 PLFGFLLAGIGDQLGTIFGKSIARVEKVFRKKQVSQTKIRVISTILFILAGCIVFVTIPA 771  
Sbjct: 193 PLFGFLLAGIGDQLGTIFGKSIARVEKVFRKKQVSQTKIRVISTILFILAGCIVFVTIPA 252

Query: 772 VIFKYIEGWTALESIFYFVVVTLTTVGFGDFVAGGNAGIN YREWYKPLVWFILVGLAYFA 951  
Sbjct: 253 VIFKYIEGWTALESIFYFVVVTLTTVGFGDFVAGGNAGIN YREWYKPLVWFILVGLAYFA 312

Query: 952 AVLSMIGDWLRVLSKKTKEEVGEIKAHAAEWKANVTAEFRETRRRLSVEIHDKLQRAATI 1131  
Sbjct: 313 AVLSMIGDWLRVLSKKTKEEVGEIKAHAAEWKANVTAEFRETRRRLSVEIHDKLQRAATI 372

Query: 1132 RSMERRRLGLDQRAHSLDMLSPEKRSVFAALDTGRFKASSQESINNRPNLRLKGPEQLN 1311  
Sbjct: 373 RSMERRRLGLDQRAHSLDMLSPEKRSVFAALDTGRFKASSQESINNRPNLRLKGPEQLN 432

Query: 1312 KHGQGASEDNIINKFGSTSRLTKRKNKDLKKTLPEDVQKIYKTFRNYSLDEEKKEEETEK 1491  
Sbjct: 433 KHGQGASEDNIINKFGSTSRLTKRKNKDLKKTLPEDVQKIYKTFRNYSLDEEKKEEETEK 492

Query: 1492 MCNSDNSSTAMLTDCIQQAELNGMIPTDTKDREPENNSLLEDNRN 1629  
Sbjct: 493 MCNSDNSSTAMLTDCIQQAELNGMIPTDTKDREPENNSLLEDNRN 538 (SEQ ID NO:4)

>gi|8452900|gb|AAF75132.1|AF196965\_1 (AF196965) potassium channel  
TREK-2 [Rattus norvegicus]  
Length = 538

Score = 1037 bits (2653), Expect = 0.0  
Identities = 520/543 (95%), Positives = 529/543 (96%), Gaps = 1/543 (0%)  
Frame = +1

Query: 1 MKFPIETPRKQVNWDPKVAVPAAAP-VCQPKSATNGQPPAPAPTPTPRLSISSRATVVAR 177  
Sbjct: 1 MKFPIETPRKQVNWDPKVAVPAAAPVCQPKSATNGHPVP-----RLSISSRATVVAR 54

**FIGURE 2C**



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Query: 178 MEGTSQGGQLQTMKWKTVVAIFV VVVVYLVTGGLVFRAL EQPFESSQKNTIALEKAEFLR 357  
MEG SQGGQLQTMKWKTVVAIFV VVVVYLVTGGLVFRAL EQPFESSQKNTIALEKAEFLR  
Sbjct: 55 MEGASQGGQLQTMKWKTVVAIFV VVVVYLVTGGLVFRAL EQPFESSQKNTIALEKAEFLR 114

Query: 358 DHVCVSPQELETLIQH ALDADNAGVSPIGNSSNNSSHWDLGSAFF FAGTVITTIGYGNIA 537  
DH+CVSPQELETLIQH ALDADNAGVSP+GNSSN+SSHWDLGSAFF FAGTVITTIGYGNIA  
Sbjct: 115 DHICVSPQELETLIQH ALDADNAGVSPVGNSSNNSSHWDLGSAFF FAGTVITTIGYGNIA 174

Query: 538 PSTEGGKIFCILY AIFGIPLFGFLLAGIGDQLGTIFGKSIARVEKVFRKKQVSQTKIRVI 717  
PSTEGGKIFCILY AIFGIPLFGFLLAGIGDQLGTIFGKSIARVEKVFRKKQVSQTKIRVI  
Sbjct: 175 PSTEGGKIFCILY AIFGIPLFGFLLAGIGDQLGTIFGKSIARVEKVFRKKQVSQTKIRVI 234

Query: 718 STILFILAGCIVFVTIPAVIFKYIEGWTALES IYFVVVTLTTVGFGDFVAGGNAGINYRE 897  
STILFILAGCIVFVTIPAVIFKYIEGWTALES IYFVVVTLTTVGFGDFVAGGNAGINYRE  
Sbjct: 235 STILFILAGCIVFVTIPAVIFKYIEGWTALES IYFVVVTLTTVGFGDFVAGGNAGINYRE 294

Query: 898 WYKPLVWFVILVGLAYFAAVLSMIGDWLRVLSKKTKEEVGEIKAHAAEWKANVTAEFRET 1077  
WYKPLVWFVILVGLAYFAAVLSMIGDWLRVLSKKTKEEVGEIKAHAAEWKANVTAEFRET  
Sbjct: 295 WYKPLVWFVILVGLAYFAAVLSMIGDWLRVLSKKTKEEVGEIKAHAAEWKANVTAEFRET 354

Query: 1078 RRRLSVEIHDKLQRAATIRSMERRRLGLDQRAHSLDMLSPEKRSVFAALDTGRFKASSQE 1257  
RRRLSVEIHDKLQRAATIRSMERRRLGLDQRAHSLDMLSPEKRSVFAALDTGRFKASSQE  
Sbjct: 355 RRRLSVEIHDKLQRAATIRSMERRRLGLDQRAHSLDMLSPEKRSVFAALDTGRFKASSQE 414

Query: 1258 SINNRPNLRLKGPEQLNKHGQGASEDN IINKFGSTSR LTKRKNKDLKKTLPEDVQKIYK 1437  
SINNRPNLRLKGPEQLNKHGQGASEDN IINKFGSTSR+LTKRKNKDLKKTLPEDVQKIYK  
Sbjct: 415 SINNRPNLRLKGPEQLNKHGQGASEDN IINKFGSTSKLTKRKNKDLKKTLPEDVQKIYK 474

Query: 1438 TFRNYSLDEEKKEEET EKMCNSDNSSTAMLTDCIQQAELNGMIPTDTKDREPENNSLL 1617  
TFRNYSLDEEKKE+ET EKMCNSDNSSTAMLT+CIQQ AE+ENGM+P DTKD+ ENNSLL  
Sbjct: 475 TFRNYSLDEEKKEDETEKMCNSDNSSTAMLT ECIQQQAEMENG MVPMDTKDQGLENN SLL 534

Query: 1618 EDNRN 1629  
EDNRN  
Sbjct: 535 EDNRN 538 (SEQ ID NO:5)

**Hammer search results (Pfam):**

Model	Description	Score	E-value	N
PF00914	Transmembrane region cyclic Nucleotide Gated	17.5	0.00072	2

**Parsed for domains:**

Model	Domain	seq-f	seq-t	hmm-f	hmm-t	score	E-value
PF00914	1/2	161	201 ..	142	182 ..	15.7	0.0023
PF00914	2/2	271	286 ..	143	158 ..	8.0	0.33

FIGURE 2D



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1 CCTAAGGGTG CAGTTCCTGC CACAGGAATT TGCCTTGGAC AGTGAACTAA
51 TTCCCCAATG CAGACCCAG AACACAACCA TAGGTCAGTT CATTTTGCAA
101 AGGAGGAGGG CCTGGAGGCT TGGAAAATAT CGTATTTAGA CCTTCATTAC
151 CCAAACGAAC CCATGGGACA GGTTTCAGGGT CAGATTCATG GGTCCCAGGA
201 CTGGATGAGC TCACAAGGTT CTGGCATGGA GAGCATGGAC CTTTGTGTCA
251 ACAAACTTGG GTTTGAATCC TCATATCGTG ACCTTGGGAA TGTTTCTTTA
301 TCTCTCTGAG CCTTGATCTT CTCATCTGTA AAAGGAGGCC AGTTACAGCT
351 TCTGCAAAAT GATCTAACAA AGATGAATGG AGAGGAAATA TGAGATGGTG
401 AGGGGGAATT CAGTAAATGT CAATCTTGCC TCCCCGTGCT CTGAGGACTC
451 AGGAGAGGGT GTCTTTCTCT GCTGAAGCCC CTCTCTGACT CTGATGCATG
501 TAAAAACAT TGTATTGCAG TGAATGTGCT AGAGTCCAGC TGTCCGTGAA
551 CAGTTAAAGA GAAGAGCGCA GAGGGAGGTT CGAAAGCCTT TCTTAGAAGC
601 ATCTCCCTCT GGACTTGAGA ACAGAAATTA CATACACACT GGTGTCTCGG
651 GGCATGGCTG GGAGAAGCAG AGATTCCTTG TTTGTTTGAT TTCTATGTCT
701 TAGCCATCCT CCCAGTCCTA GTAGAGAGAG GCAAAGTGTG GTTACAGAGT
751 CCAGGGAAGA TGGTTCGTAA GCACCCGGA ACCTGCCTAA AGGGCTGAAG
801 AGTCAGAGTA GCACCATCAG ATTGGTACCA GTTTTGCCTG AACGGGGTTT
851 GCAGAGAAAT CAGGGCTCCA GCCTGGGGTG CCTGTGACAG CCCAGTGACA
901 AAGCACTCAC CTTTCCCACA GACCACAGCG GACCTCTGTA GGTCTTGCTC
951 TTGGACTCAG AAACCTTGAT GTGATAGTGA GGGATGGATG GTGAGAAAGA
1001 TGCTGCTGAC ACAGGGCTCC CCAGAAGCCT CAAGGTGCCG TAGAGTAGCA
1051 TGCAACTTAG AGATCAGCTG CTAGTGTGGG ATTTTAGGAC CCCAGCTGGC
1101 AGGCATAGGA ATGAGCTGGG CAATTTCTAT GCGTAAGTAA AGGCAACAAC
1151 AATCTAACAG GACCTTATGG CACTAGATAG TAAGCCCAT GAAGGCAAGA
1201 TCTCTGTCTT GTTCTCTGCC ATATGGCCAG CACATAGCAC AGTGATGGCA
1251 CTTGGAAGGG GTTCAATATA TATGTTGAAT GAACAACAAA TTTTAGTAAC
1301 CTTATCTGGA AGCCAGAGTA GGGGTTTAAA CTAATTCCTA TCCAACACTG
1351 CAGCATGCAA TTCATGTCTT CATTTAGCAA GTATTTCTTG AGCACCTACT
1401 ACGTGTAAAG CTCCTGTGCG AGGCATCCGA AGCAATTTGT CAGCATCATT
1451 CATGTTGATA CTCGGAGTGA CCCGTTCAAG AGCACCTCAG CACCACCTGG
1501 CTTTTCTGAA GACTGAGGCC CCACCACAAA CCCCTGTGGG GCTTCAAGCA
1551 GGGGCAGTGA GAGGGCGTTA GACGAATGCT CCAGGTTTAG CCCCTTTCCG
1601 GGAACAGGTC TGGGTCCCTT CGCATCTGCC CTGCTGGTCC CAGGATCCCG
1651 GGGCCGCCGC TTCCGGGAGC TGCCGGGTCT TGGCAACTCC GCTTTCCTCC
1701 GGGGGCCCCC GTGCCTCTCT CAAGCCTCCT TTCCAGCCAA CGACCAGCGG
1751 CCCAGTCCG GCTGCAGGTA GCTGGGGAAG GGACCAAGCT GTGCCTTGGG
1801 AGCGAGCTTC CCCGGGCGGG GAGAGCGCAG CAGATGCGGA GCGTCCCAG
1851 AACAAAAGGC TCATGGCTGG CACGGGCTC CTTGGAGTGC GGCGGGGACG
1901 TGGGTTCCGG ACTCAGGCGA GAGAGCCAGA CGCGGGAGGA AAAAAATGA
1951 AGTGAGAAAA GAGAAGGAGG GAGAGCTCAG GGTGAGAGCG GTGAGAAGAG
2001 GTGACCCGGA GGCGAGGTC TGCGGCGGAG CCGCAGCGCG CCTTCTCCG
2051 CCTCTGCAG CGCCTTCAG GCAACCAAGC GTGTCTCCGG CTGCAACTCC
2101 AGCAAGCGCG CCGCTGCCGC CTCCACGCCC GCGCGCCGGC CGGCGGAGCC
2151 AGTAAGTAGC GCGCGGCCA CCGCTCGTTC CCCGCCCTC CGCGGCTTCC
2201 CCGCCACCGC CCACCGCCTC CCGCCGCCCC GCGGGCAAGT CCGCGACCGC
2251 CTCCCGCTGC CCCGAGCCGG GTGCCGGGG CTCAGCGCGC CTTCCAGCT
2301 GGGAGCCTCG GTCCGTGCT CGCCCTGCTC CTCTTGCCG GGGCGGGCG
2351 TCTGGGGCGC GCCGCGGGA GGGTCGCCCT CGCCGCGCG TGCCCGGGCG
2401 CCGCGCCACC CCTACATCCA ATGGCTTTCG GGGAGCGGGA AGTGGGGGCG
2451 GTCGCCGGGG GCGAGGAGCC GCGGCCGGGG TGGGGCGTGT GCGCTCAGCG
2501 CGGCCGAGCG AGGCTGACGT GCCCGCCCAA GCGCGCGCCC GGGAGTGTGT
2551 GTGCGGGTGT GTGTGTGCGG GAGTGTGTGC GCACACGCT TCGGGGGCTG
2601 GAGTGACACT GCAGTGGGCT TCTCCGTAGC CCCAGCCTT AGGCTGCGCA
2651 GCCCCTAACC TGCCGACACC GCTTTTGGGA AGCAGCTTGG CTCTCCATC
2701 TCCCCAAGCC TTCTCTCCA TCCTTTCAT CACCCCTCGC CGATCTTACT
2751 TTTTCTTTTA CCCACGGGGC CGCGGCCGGC CACCCCTGG CCGGTGCAAA
2801 CACCAAGCC CTCTCCAGTT CTCCCCAAG CTAATATTTT CCCACCTGTC
2851 TTTTCTGGG GTTCTCCAC GAGCCAGTCC AAGGCTCCCC CATCCTCGGA
2901 AATTGTTTTG TTGGACTGCT AAACCGAGGC GTGTAAAGCT TGAGGACTTT
2951 ATTATTATTT GGGTTCCTTT CATTCTTCC CTTCTGGGC AACGAAGCAA
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FIGURE 3A



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3001 TGAAATTTCC AATCGAGACG CCAAGAAAAC AGGTGAACTG GGATCCTAAA  
3051 GGTGGGTGTT TCCTACTTTT GGCTGCCCTC GCCCTGCCTC TGTCTCCGGC  
3101 GTGTGCGCGC TTCCTTGAGT GGAAGCACTC TTGCTTCTGG CAGCGTGTGT  
3151 CCTGAGGCTG GGAATGCGC CTGGGAACTG CAGCGCGGGT GGGAGGAGGG  
3201 CGGAGGCAGC GTGGGTTCGG AACCCAGATA GTGCCGTGCA TTACCACATA  
3251 ATCATTGTCC CTCCTAGATT GTCTCCAGAT CTATTTAGAT AGACCAAGCC  
3301 GACTGTTTGG TTTGAAATTG CAAGTGTCCG TATTTGCTTT TGACTTTGAG  
3351 TGTGCGAGTG TGTGTGTGTG TGTGTGTGTG TGTCTTTTGT TTCTGGTGAT  
3401 CTTTGTCTCT CTGGCAGATG GGTGGGGTGC TTCCCTCTGG ACCTGGAGCT  
3451 GCGCCGCATG CCGGGGTGTC CTCAGTGGGA AAGGTTTCCT GGCAGCAAGT  
3501 GGGGCTCGAG TTGCAGCAGC CGTCCCTAGG GGTGGGCCGT TCTCGCAGGG  
3551 CATGCAGAAAT AATGGAGCCC ACAGGGCCTC CTGAGTCTTC GTTCAATCTT  
3601 ATTACCAAAC CTAGCAGCTA GTTAGGCTCA GGTCAGAGTA GAAGCAGGAG  
3651 GAGGGTGGT TGTGAGAAG GGTGGGGCTG GCAAGGCATA GGGGAGGGGC  
3701 ACGAAGTGTG CCCGCCAAG CAATGGTGTG GTTTGCATGC TTTTACGAAT  
3751 GTTGGACCAG GTTTCATCCA CGCAAAAGGG AGGGATTAAAG ACGGATTGT  
3801 GTGTGCCTAG CGTCGGCCAC CGTGTCTGTA ATTAGCATAC AGATGTTAAG  
3851 GCTCCAAGGG AGTGATCAGT ATGAGAGCAG AACAAGTTGG AACCGCGTGT  
3901 CCAGTTGTGA CAAGAATGCT CTTTAGCAAT TCTTGTAGCT CATCTGACGA  
3951 CTGTGTCAGG CTAGGCAACG CCTCTGTGTG TATTGGAATT GAAATTTGTT  
4001 TATTTGGGGT GCGTGTGTGT TTAATGTTCT TTATGAGCGC ATTTCTTCTT  
4051 TTTCTCCAGA CTGGAAGAA GAAACCATCT TATTTGTGTA GTAAATGTCT  
4101 TAGGAATTGA CTGGCTATTG AAGAGTGAGT GAAGAGATAC TGCCTTTTGA  
4151 AAACACTGAG GCTGTTACAT CTTAAATACA GCCCAAACCT TCTATTTTGT  
4201 CTCTACTTGA AATCTCTGGA AATATGGAGG TGTGCCTTTG CTTTTTTGGG  
4251 GGGAGAATCC CTGAAAAGCA TATTTGTAA ATACCTATTA CATGCTAAAC  
4301 ACTGTCTTAA GCTCTGGAGA TACAGTCAGA ACAGGAAAGA TAAAAGCTCT  
4351 GACTTGGAGT TTACAGTGAG GGAGACAGC CTAAATCAAT TCCATGGAGG  
4401 AATGCATAAT TCAAAGTTTA TGTATGCTCC AGGGAGAGCA TCAGAGGTTT  
4451 AAGAAAGTGT CTGATAGAAG AGATTGACAA GGACCAGAGA AGGCTTCCCT  
4501 GAGGACATGA CACTTGGACT TAGGCCTGGA GGATGTATAG GAGTTAATTG  
4551 TCTAAGGAGG AGGGGAATTG TTGCAGAAGA GGGAACAGCA AGTGCAAAGG  
4601 GCCTGAGGCA GAAGAGGTAT GTGTATATGA TGAAGTAAA GGAGGTTCCC  
4651 ATGGCTACGG CAGAGTGAGT GAAGAGGTAT TGCCTTTTTT AAACACCCAG  
4701 GCTGTTATAC TGTAAATACA GCACAAACCT TTCATTTTGT CTCTATTGTA  
4751 AACCTCTGGA AATACGGAAG TGTGCCTTGG CTTTCTTTTG GGAAATCCCT  
4801 GAAAAATGTA TTTATCCCTA GCAGAGAGCA AGAGGGCTTG TGTTTTGAGA  
4851 TATGACTGGG GGATCCACAG GCGAGACGCC CCCCTCCAAG CCCTGTGTTG  
4901 TTGGAGGTGG GGTAGCATTG TGGGGTTGGA AGAGTATAGT ATTTATCTAA  
4951 AGCCAATGAA GAGTTTCAAG ACGAGGAGTG ACATGATTTG AGCTAAGTTT  
5001 CAAAACAAGT CCGTGTGGC TCTTGTGGAT GTAGGGGACC AGATACAATG  
5051 GTAGCATGGG CCAGGTGGT TGCTGTGGGC ATGGAGAAGC GGACGGAGTA  
5101 GAGAGCTGTA GAGGACGTGA AATCAACAGG CTTTGCATGA ATAATGTGTG  
5151 GAAGTGAAGT GAAGGAATTG GAATGACTGA GATGGCAGCC AGGGCAGGAC  
5201 CAGTCTTGAA GGAAAGCTCA TGAGTTCAAT CTAGGACTTG TTGAGTAGGA  
5251 CATGTCCCA AGCCATCCAA GGGGTGTGTT AGGTGGGAG CTGTCTAAGT  
5301 GCTGGGGTCA GGATCTTCAA GGAACAGAGG GAGTACCGTG AGACTGATTT  
5351 TGTGAAGCTG GCTTGTGTT TTAAGGTACA TTTCTGTGTG ATCATATTCT  
5401 TATATATTCA TGTTACAGTG ATGAACACAG ACAAATTTTA CACATTTTAC  
5451 AGCCTGACAC AGTGAAGAAA AGCATACAAA TAGCACCTTC AGTTACAACC  
5501 AGTGGTGCTA AAAATGAAAA AAACCTCAAT AAAAATAACA ACATTTAATG  
5551 AGCAACCAAT GCATGCCAGG TGCTTTATGT ACATTGTTTC ATACAATTAT  
5601 TTTCACAATA CTTATCTGAT GGTATAAGTG TTATAGTTCC ATTTGGCACT  
5651 TGATTGCCAT CATGACACCA CTAATCTGCC TTCCAGTGGA GTTGCTCTGA  
5701 CTTTGTGCAC AGTTATTCCC AAAGGTAGGG GTGACAGTAG TCTTTTCTA  
5751 GCCAGGGGAT GGAGGAGGGA AGAGAGTGAG GAGTGAGGTG GCATATCTCT  
5801 TATCTGTATA GAATTATGTG CTAGGTGCTC TTCTAATGTT TTACATGTGT  
5851 TAATTTAATC TTCACAAACA TTTTAGGAGA AAGGTATTAT CCTAATTTTA  
5901 CAGATGAGTT AACTGAGGAA CAGAGAGTTT GAGTAACTTG CCCAAGGTTG  
5951 CACAGCTAGT AGGACAAGAT TAGAATCTGG GCTCTTAAAC ACTCTTCAAG

FIGURE 3B



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

6001 TCTGTGTTTC TTATTGGGAC TTTTGGCTTT TGCCTGGTAA GGTTCCCAAA  
6051 GCTCAGGAAG TGGAGAAGCT TGTTGCGAGG AGGAAAAGGA GAAGAGAGAG  
6101 GATGAAGAGG AAAAGGGAAT GGAATAGGAG GAGGATAAAA GAGAGGAAGA  
6151 GAGAGGAGGA AGGAGAAGAG GAGACAGTGG CTCAAGCTTA CCCTACTTGT  
6201 TCCTTTCTCT ACTAACCTAT TCAGACAATA ATCTTTTCAT TTCCATGTCT  
6251 GATGGGCAAG TCAGTGACTA CTGGACAGAG TTTGGGTCTC TGTTTTGGAG  
6301 GTTCTGGATT ACACAGACCA AATGTGTTTA GCAGGAAAAA GATGAAGGGG  
6351 AGCCCAGCAG TATTAGGGGA AAGTGGAGAG ACAGTTCACA TTACTTGGAC  
6401 TGTAGGATAT GTCTATCAAC AGACATGACC CTTCAGGCGG AGGTGCTCTC  
6451 ATGGGTCTCG GAAGGCAGTT GTAATTATAA TGTTTTTCTT ACAGCCTTAT  
6501 TACCCTACAA TTTAATAGCA AAAAATGAAG GTGGTTTGAG AATAGATTGG  
6551 TTTGGATAGC ATTTGGGTGG ATTAAGCAAA GCATTGTCAA GAGGTGTAGG  
6601 TAAAAACAAG ACCCAAATAT AAAATGGTTC ATCTCTGGTG AGCTATGGCC  
6651 TTCCTTCATA TTCATGGAAC AGAGACTTCT ACGAAGAGCG TTACTGTTTG  
6701 TGTAGGACCT ACCACAAGTA GATTGGTTCT AAGTCTTAGC TTTCATAGCA  
6751 GAATTTACGT GCACTTTAAA TCATCAGCAT CATTTGTTGA TGATTTTCTG  
6801 CTTAAATTTG GTATTTACTT GCTGCTTATG TGTATTAAGA TCTTTTTAAA  
6851 ACCAGTGAGA TCTGCAAATA GTATTCCTCT CACTAGAGGC AAGCAGATGA  
6901 ATACAGTGTA AAAAAACTTT GGATTTGGGG GCAAAATAAT TAGGTTCTAA  
6951 AAGCAGCTGT AGCAATACTT AGTGGTATGA CTTTGGGCTG CTCATTTAGC  
7001 TTTTCTGGGT TTCGCTTCCC TTCCATGGAG AAAGGAGTCA TTGCCTTTGT  
7051 CTACCTCTCT GACTTTGTCT CTTCAACTTT CCCCATCTTG ATCTGATCTT  
7101 GGGGCCAGTT GGCTTCCTTT CATTCCTCAA ATAGATCACA CTTGCATCTG  
7151 TCTGAGGGCC TTTGCGCTTG GAATCCCAC TGCTTATAAT GCATTTACG  
7201 TAGTTGGCTC CTTTCTGTCA TTTGAATCTC AGCTCAGATG TCCTCTTGTT  
7251 AGCAAGGGAT TCCCTGTCTT ATCTGAAAGA CCTCTCCTCC TGTTCCCCAG  
7301 CACCATCATT TTCTCTTG TGACCTATTC GATTGTCTTA CTGGCACTTG  
7351 TCATGATTTG AAACCATCTC ACTTACTCAT GGGTGACATT TGATGCCAGC  
7401 CTCCTTTACT AGCATATGAG GTGCATGAGC AGGGACTTTC TCTGTCTTGT  
7451 TTATTGCCAT AACCACAGTG CCCTGGAAAG TGCCTGGCAC TCAATAACCC  
7501 TTTGCTGAAT GAATGGAAGG TTGGCAGGAT GGACTGGAGA GGACTGAAGG  
7551 CTTTATGCCT CATGGAATTT GCAGGACGCC TCTCAGCTAT AAATGGCAAA  
7601 GTACAAATAA GGAGAAAGGA AGAATATCCC CAAATAGTGG CATATCAGAA  
7651 AGGACGCTGA TATTCCTACT TCCTTGCAAG CTCCAGCTCG CTCTAAACCT  
7701 CCAGTGCGCT GTTTCTCTTC TTTTCTCGTC TTTGACCAGA AGTAAGAAGG  
7751 CTGAATAGAA GTGCAGTGAG GGTGGATGGG TGGACTGATC TAGCCTGCTG  
7801 AAGATATGGT CAGTGTCCAA TAAATAATTT GGCTCATATT AGCTATTGGA  
7851 GTGTGGCTAT TTTTAGGCAC TTTAATCCAC TTAAGAAAGA AGCAAAGCTC  
7901 TAGGAGTGGA GGTGGATTTT TTTTAAATG CTACACTTTT AGTGCACT  
7951 TTAATGCAAA ATTCTGGAGA AGCCCATACC TTATGTGCAT AGCACCTTTC  
8001 AGTTTACAGA ACACTTTSTA GGAATGATCT CATTTGTACT TAAAAAACC  
8051 CTATTTTGTG AGGGATTAGA GTCTTTAGATT TACTGACAAA TAAAGCAAGA  
8101 TGTAGAAAGG ATAAATGATT TATGTGGGAG CCCAAAGCAA CAAACAGGCA  
8151 GAGCTGGGGC TACCCTAGGC CTTTGTATGC TTACGTCCAT GACAGTTTCC  
8201 TTCAAGCTTT CCTTCTCCCC AGCGACTTTG TTCATTCCAC ACTCTCCTGC  
8251 TCTTTGTTAC CCAAAGTGT GTTCAAAGGT TTCTCTGAGA GATTTAGAGG  
8301 AAGCAGTCTC CTTGTTGATC AGTGAATCTT TAGTTGATGG CTATTTTCAG  
8351 CAGGTTGTGC TTATTGTACA GGTCTACACT TTCATTCTAT GAGCTCAGGT  
8401 GAAGACCTTT AGATCTTCCT TCTGCTGTAC TGGCTAAAAG AAGATTTTGG  
8451 TCTTTTGTGA ATGGGGGCCA TTTTCAACTT GCTAGGTTGC TTAAGTGCTA  
8501 GCTTTATTAA CGTGTTTCCA AACACACATT TGTGGAGCTT AGATTTCCTG  
8551 GAAAGAAAAT AATCTATTTT TGATTTAATA TCCAATTTTC AGGAGATCAG  
8601 TGTTCCAAAT GGGATTTAAA ATGTGCCAAA ATCACCACAA TTATCCTCAA  
8651 AAGTACCAAG GAACAGTGTG CCAAAGACTG TCTTGCCCAA GATTTGGTTC  
8701 AGGCTTCTTT TCCAGCAGTG TCTAAGGAGC TTCACCATCC TTTTGTCTAA  
8751 TCCAGTGAT CACTGGGTG AATTAAGACT GAGCAGGTG ACTTTGCTGT  
8801 TCCACACCAT TTCCAAAACA TCTGTACTTT GGCTCCATAT GAACCCACC  
8851 TTAAATCTGA TGCATTTAAA AAATATAATA TAGTCTTCC CCTCATTAGG  
8901 AAACCTCAAC CACAACAGG ATATGGTGTG AAGTATATTT AATATAGGCA  
8951 CAGTGAGCTA GTGATTTCTT TTTGACTTTT AGTCTACAGG AAATTAGAGG

FIGURE 3C



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

9001	AAGAGTTTAA	TGATAAAATG	GAAAGAAGCC	ATTCTACTGA	TAGCCAGTTA
9051	GGAAGTTTCA	GTTTGGACAG	CTCCCTTGCG	TGATGCAGAA	AGGTGGATAA
9101	AAATGACAAT	CTTTTTCTGT	ACTCTGATTC	TTATAAAGGG	CACCTACTGG
9151	ATGATCCAGA	TGAGGTTAGA	GTGAGTTAGG	GGCTTAGCTC	TACATGGCAT
9201	GTTTACAGAA	TCTACCTAAC	CGTGGCACTA	GGAGTGTTGG	CACCTGTTTG
9251	GTTCCACCCA	CCTGGGTGAT	TTCTCTCCAT	AAGAATCATG	GAGGTCAAAG
9301	GGACCTTCCA	CTTCTGGGGT	CTGGTCCTAG	GGGTACTCTC	AGCGGAGACT
9351	TTACAGTTTA	TCTATGTCTG	GCTCATTACC	ATCACCTACA	ATGGGGAAAT
9401	AAAGACCTCA	TATTTACTTG	CTAGAACATC	TATTTGTCAT	TTGCAGCCAC
9451	AGTTTAAGAG	TTTTTTTTTT	CTCCCTGTGA	GTGTCTAGGA	CTGAGTACTC
9501	TGAATTGAAA	ATGAAACCTG	ACTTCCTAAT	CCTCCATTTA	GGGTGGAAGG
9551	GAGGGAGTAA	GGGTCAATAA	CACTGGCAGG	GGAGGGCACG	GTCATGAGGG
9601	AGCATTGCAT	TCTTTTCCCT	TGCCATTCCC	AGAGCCAGGG	AGATGGGGAG
9651	GGGTGGGCAT	TGGAGGTAGT	GGGGATGAGG	CTGGGAGATG	GATGGGATTT
9701	CAGGAGATT	TAGGTTTTGT	ATTACCAATA	ACTGCTAGTC	TCATCACTTA
9751	CCCTTTCCAT	GGAAGTAACT	TTGAAGCAGA	GTGGAATGGT	GGGGAAACAA
9801	GATTAGAAAG	GAAAACATAG	GATTTACTGC	CATACATAAG	CCAGGTGATC
9851	ACAGGGAACT	TTTCCTTCAT	TCCTCCCGTC	CTTCTTTTCT	TCATTCCCTT
9901	GTTCCCTCCC	CACCGCCATC	CCCCCAAATC	CTGCAGAGTC	TTGATCTCAA
9951	TTGCTCTCGC	TTGTGCAAAG	GGTCCTTTCT	CCCTTACTCA	ACTACCCAGT
10001	GTGGTGGGCG	TGGTGGTATT	TACAGTTTAA	AAAGAGTTGC	TTGAATAGAA
10051	AATGAAAATT	TGGTCGGGTG	ATGGAGAGCC	TGGAAGTCAC	GGTAACCTTT
10101	GCAGACGCCT	AAAACACCAA	TATTCATAAT	TTTGACATGC	AAGCTAGCAA
10151	CAATTTTACT	ACCAAGAAAA	TGAGTTTCTT	ATGTGCAAGC	AGAACTCGAG
10201	ATCCCCTAAA	TAATCACACA	CCAAATATTT	AGCATGATAA	AGATAAATAG
10251	TATAGCTTAC	TAAATTTAAT	GTGATATGAG	CCTGACAGGC	AGAATAGAGA
10301	TGCTTGATAT	TAGGTGTGAT	AAAAGGTTTG	ACATCCAACA	TTCACTTACT
10351	TCGTCTCTCG	AGACAAAAGT	CAGGCACCAA	GTGTTTAAGA	AAAATTGATG
10401	GGAGGAAAAG	CTTAGAGATG	AATAAAGTCT	ATTTATTAAT	TTATATTTTC
10451	CTCTGAGAAC	TGGGGAGTGT	TGTTACCCAT	GTAACTGTG	GACTAACCTG
10501	GGCCAGCTCC	TGGATTCTAC	TGGCTAAGAA	TGTTGCTTTA	GGCCAAAGGA
10551	ATTTATCCCT	CATGGTGGAA	TTTGAGGCCA	TATGGGAGGT	GATTATGATA
10601	GATCTGTTTC	GGCCTCTACA	TTCTTACAAT	AACCTGAAAG	GAGATTAAAT
10651	ACATGTTATA	GTCAATTAAC	CTAGACTCCA	GGCAAAATGT	CACCTCTGT
10701	ACAGTATAGG	AGCTTAGGAT	AGGAGACCTG	GTTTCTAGGG	CTGGCGCTGC
10751	CACTCATTTA	GAAAAGGAGG	GAGTTGAGTT	GTTGGTTGTT	GAGATCCCTT
10801	CCTTCCCTGA	TAGTCTTAGA	TTGCCTGAGT	CCTAATCCAA	GCATGATTTA
10851	CTAGAGGCTG	ATTTGGGAAC	ATTGCTTCAT	TTTTCTGTGA	CTTGGTATCT
10901	TCATCTGCAA	GATAGGGATA	ATTACAGCCA	TTACTTCTTT	GGTTTGTTAT
10951	GTGGATTACA	TAAAGTGATA	CATGCAAAGC	TCTTAGAAGA	ATGCCGGATC
11001	ATCATGAAGG	CTCCATGAGT	GGTACCTGCC	TTGTGCTGTT	CTCACAGTTG
11051	CAGGAGGCAG	CCTGTGAAGT	CAGGGTAGCC	TCCAGCTCAG	CCTCTTGGAA
11101	GCATCTGGTT	CACTGTCTGG	ATCATCCAGG	AAGTGGTCCA	TAGCAGAGCA
11151	CAACCCTCCT	GATACTCTGG	AAGACTCTTA	GTATTCTTAG	TTCAGATGTA
11201	AACAACCTAG	GCTGTCTCTG	TTAACTCAGA	GAAAAGACCA	GTGAAAGAAC
11251	ATGGCTTGGA	ATCACAATAT	TTGAGTCTGA	GTAAATGTAC	CCATTTTATT
11301	AGCAGTGTAT	CATAGTTGAT	TTGGCTGCT	TTAATAAAAT	TCCATAAACT
11351	AGATAGATTA	TAGACAACAG	AAATTTATTT	CTCACTGTTT	TGGAGGCTGG
11401	GAGGTCCAAG	ATCAAGGCAC	TGGTAGATTT	GGCATCTGGT	GAGGGCCAC
11451	TTTTACAGTC	ATAGATGGTG	CCTTCTTGCT	GTGTCTTAC	ACGGTAGAAA
11501	AAGTGATGGG	TCTTTCTTGG	GCTTCTTTGA	TAAGTGCAG	AATCCTAATC
11551	ATGAAGGCTC	CATGCCCATG	ACCTAATTAC	CTTCCAAAGG	CCCCATCTCC
11601	TAATAACATT	ACCTTTGGGG	TTAGGATTTT	AACATATGAA	TTCTGGGGGG
11651	ACACATTACG	ACCATAACAC	TGTGTGAAGT	TGGCCAAGTC	ACCTAACCTT
11701	TCCTAGCATT	AGTTTTCTTT	TGGGTAAAT	AAAGATCACA	ATAACAACCA
11751	CTTCACAGTT	GCTGAGATGA	TCAAATGAGA	CAAATGTGAA	TAAACTTCAT
11801	AAACTGTTAA	ATTCCAGACC	AACATTTCCC	AAAATGTGTT	CTGTGAGACA
11851	TAAGCTAGAC	TCATCAGATA	CTCTGAGAAG	AAAAGTGGTG	TCATGGTAAA
11901	GTCAGTTTGC	AGGATGATAC	GTGCTCAGTC	ATTCTAGAG	AGTCATCATG
11951	CACGTTAGCA	TGTTACTGTA	TTATTGTGTA	ACAAATAACC	CCAACATTTA

FIGURE 3D



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

12001 GTGGCTTAAA TCAATATAAA CATTATTAT CTCATAAGTT CTGTGGATCA  
12051 ATAATTCAGG GATAGTTTAA TTGGGTGGTC TGACTAGGAG TCTGTCATTG  
12101 ATTGTGGTCA GATGTTGTCC GGGCTGCTGT CATCTGATGG CTTGACTGGG  
12151 GCAGGAGGAT CTGTTTCCAA GATGGTGTGC TCATGTGGCT TGCAAATTGC  
12201 TGCTGGTTGT TGGGGAGAGG GCTCATTTC TGCCAATGTG GGCTGTCCA  
12251 TGGGATGCTT ATGTGTACTC ATATGTGACA TGGTGGCTGG CTTCCCAAG  
12301 AACAAGTGAT TCAAGAGAGA ACAAGGTGGA ATTGGCAACA CTTTTATGA  
12351 CTTAACTTCA AAAATCACAT ATTGTTACCA CCACCACGTT CTTTTCATTA  
12401 GACGCCAGTC ACTAAAGTTA GTCCACATCT GGGGAGTGGT GGGGGTGATC  
12451 ACATTACCGT TGGAAGGGAG ACATGTCAAA GAATTTGAAG ACATATTGAA  
12501 AAATCACCGT AAGAATTTTT TCCTATCATT TATTGAATAG GCACCACGTG  
12551 CTAGGTAAA TGCTTTGTAG TTATTATCTC ATATAATCCT ATTCATAATC  
12601 CAAAGAAATA GGTGAAATTA TTATCTCTGC TTTCTGAATG AGGAGGCTGA  
12651 GGCCTATAGA GCTTAAGTAA CTTGCCCAA GTTACCTAGT CATGCTACGA  
12701 CTTGAACCG AGTCTGTCTG ATTTAAAGCC TGAACCTTA CCTCTGCCTC  
12751 ATATGCCTCT CTCTGATAAT CCTGTAGTTC AGAAGTCTGT TTAATTTTGT  
12801 TTAAGCCTGC ATTTTCTACT TAACCACAGA ATGATGATTC ATTTAACTCC  
12851 ATTTTTACCC TTTTCAATTAC CAACGGCTTG AAACATTATT CTAGAAAGAC  
12901 AGTGAGCATG ATGATGATTT ATGTATAATA TGAACATATG GTCTCATAAT  
12951 AGATCCCAGC ATACCTATCA GTCCAACTT TTTGTATTAT TCAAATACTG  
13001 GAAGTGCTA TTTTGCCTGT CTTGTGTGGG CACCATCTAT GTGTAAATCT  
13051 GTAAACATTA ATTTAAAAA AAGACCCCAT AATCCACCTT ATTTTCTGT  
13101 ACTGTGAAAC TAGAGGTGGG GTGTGATAAC TCATGGTCCC ACTTCTCTTA  
13151 CAGAGTCCCT TTCTTTGCAA TGTCCCTTCT TTTACAGATT CAGTGACTGA  
13201 CAACCTAACT TTCTTGGGTA AAGCCAGAAA AAACAGGATG GCCTCCAGGC  
13251 CGAGCAGTAG AAATGCTGGG GAATGGGGTG TCTGGTGTGT GTCTGGTGTG  
13301 TTCCTGCAGT GCCTGCAGGC CATGTGTCTG TATGGTGACT GAAACGCAAG  
13351 TCGGCATCCA CCGAGGATGG CAGGGACCGT GTGCCTGGGG GTGACGGCAA  
13401 ACACACAGTG AGAAGCTGCT GATGGAGGGA GGACCGTTAG CACTCCTTGT  
13451 CATATTTTGA GTAAACATTT TTTTACAATC TTGTGCTTTT TTCTGTACAG  
13501 TCTTGAGAAA ATGATTTCCA GGAAGCAGGA TGCATCCAAT GACTTAGAGG  
13551 TTCCCATGTT TCCAAACATT ACATGCCTGG CTTATTCTCTG AGGCAGTTTT  
13601 GTATTCTGAA GGAAGTTTTG GAGCTTCTGT GTTCTGGGCA GAGGCGAGTG  
13651 AATATGGTTT CTTTGTAGTA GCACCGTGA CTTGAGAATG ATCAGGAGCT  
13701 GGACATGTTT GAATATGTCA CTTACTGCAC AAAATGGCAA AGACAGGGTC  
13751 TGGGACAGGG TGAGAGTGTG TTGAATGGAG ATGCCTGGGG CCCCAGTCAC  
13801 ATTCAGGAGC CAGCACTGAT GGCATCTGTA ACCATAGTAA CCAAGAGTGG  
13851 AAAAAGTCTC AGGATGCCAA GACGCCACTG TGCCCCCTT CTGGTTCTGT  
13901 TGTTTTCCCC TCTATTCTTT CATCCAGAAA TTCCCCATC CCTGCCCCCA  
13951 ACCACCCTGA CAAGGGACTG ACTTTCAGGG TGGTTTCTAC ACTGGTGATT  
14001 TTAATTCCT ACTAATCAA CACTTCCTGT AGCCCTTTT TCAGTTCTGA  
14051 GATCCACAAG GATTCAATTAT GATCCAGACT AAGCCTCATG CACCTAATTT  
14101 CTTCCGCTTT TCCATTTTFA CTGTGAAAAT TGGTCTTAAG TCCTGTAGTA  
14151 TACATACTCT AGACTTATTT ACAGCTGGGC ATAACAACGG TGGCTCATGG  
14201 CACTCAAAGT TTCCAGTAAC ACTCCTGCAC TCACAGTCTG GTATAGATCA  
14251 TGAGATTTTT TTAGATGTGT TTTAAATGAA CAGAGAAAGG CAATGAGGCA  
14301 CAGGAAAGAG AGCCGTGGTC TCTTGTGTTG AGATGTGGGT TTTGCTACTG  
14351 GTTGAAAGT GAGGTGTGGC ATGGCGCATG AGGTGGGGA GAGGTGGGTG  
14401 ATGCTCAGGT CATGTAGGGC ATAGTAGGTC TTACTTACTA AGGAACCTT  
14451 TTTTCTGAG AATAACAGGA ATGTCTTGAT TGATTTGAAG TGGGAGGATG  
14501 ACACAATCAG ATTTTAAAA GATTATTTAA ATCGCTAATA AATCAAATGA  
14551 TGGGTTACGC GAATGTTTGC AGAGGATACT TACTGTGTGA CAGGCATAGT  
14601 GCTGGCCTTA CCTGGGGTAT CTGTGTATTC TTGTAGGAAT CCTACATAAA  
14651 AGCTGTTAAA ATATTTTAA AGAAAAAGC TTTTCTTGAC ATCTTTGAAT  
14701 TATGACAACC AATTCCAAAC TTCTGGTTGC AAATGGGAGG TGTATCTTAA  
14751 AGCAATGGCG ATTGCATTTT CAATTTCTGT TCATTAAAAAT GATATTTTCC  
14801 CTGGCTTTGT TACATGACCC TTGATTCTGT GATAATTTGC ATATCTAGAG  
14851 TCGATGAATC AATACATGCA AAAGTGTGGT GCGCTCGCTC ATATTCTGTT  
14901 ATAATTGAGA CGCCTTTTGG AAGCATGTGG CTCTCAGTTC AGCATAATGC  
14951 TCCTGATAAA ATTGCCCCCT CCATACCCGC CGTCACTTTG TTCCTGGTGT

FIGURE 3E



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

15001 GTCCAGAGGT ATTGTAACAT TGGGGTATTT CTCCTTTGAC TCTAATGGGA  
15051 CCCCCTGCTA GTTGTGTTCT TGTGGCCTCA GCTTGAAGG CCTCCCAAAA  
15101 GCCTGAATTA ATGAAAGCTT CTGATGTGCC GATCCCTTTC TCTGGCAGGG  
15151 TGAGAACGCA GTTTCTATAG GAGCGTGAAT GCCTGCTGCT CAGGCAATAA  
15201 TCTCTGCATT CAGCCTCAGT ACTAAAGACA GGCAGAGCAG ACAGCCACAG  
15251 GGGGTGGGAT TTGAGGAGCC CTATAAAGTC CCTCTCCACA GCTGACACAC  
15301 ACCACTCCTT CCCATGACTA TCAGGATGCC TACAATCTTA ACAGTTACTT  
15351 TATTCATTGG CTGTTGTCAC TCATCCATCT GGTATTATCCA TAAACACTTA  
15401 GCGAGTGAGT GCCTGCAGAA ATGGGGCTAG GCATTGGACA CAGAAAAGATG  
15451 AAAAAGACCT GAGGCGTGTA CCCAGAGAAG TCACAGCCTA GCCACTGAGA  
15501 ACAGGTGCAT CATCAAGTAA TTATGATATA CCATGATAAA TGCATATCAT  
15551 TTATATGGTA TATGATATAC CATATGATAT GGGATATGAT ATACCATATG  
15601 ATATGGTATA TCATATACCA TATGATATGG TATATGAGAG AGATATGGAT  
15651 TAAAACATCA GCTCCAGAAC ACATCTTGTT AACATGCGAA TGTAGTTCCT  
15701 CAGGGTAACA AACTAATTTT CAATTACCCG TGGGTACAGC CAAATTAATA  
15751 GTTCCTATGA GAGAACTGGA CCAAGCAGAG AACAGCAACT AGGGACTGAT  
15801 ATGTATTGAT AGGCTGGTGT CAAGTGGGAA GGGGGGAAGT CAGGTGCTGT  
15851 GTAGGGAGCA GACTGAGAGC TCTGGAGGGC AGGAGTGCCA GGAAGGTCAC  
15901 TGAAAGCAAC TTTTCATTTG TGCAAAATGTT GTCAGAGGTT GCTCTGCTCA  
15951 TGTTAACTC ACTTTATAAA GTGGAAGGAA CTTTAAAGAT ATCCAAGTCC  
16001 ATTGAGGCTT CTTAGGGCAA TACTGAATCT AGATTGGTGA AGTGACTTGT  
16051 GCTTGCCAG ACAGCAAAAA GAGGACAAAG CATATCTATG AACCCGTAAT  
16101 GCTAACCTTC ATTATTCAAC AGTGATGCTT ATGGCAATGC CAACGGGTGT  
16151 TGGGGCCTTT TATTAATTTT TAATTTTAGT TTTTATGTT TTTGAGACAA  
16201 GATCTTGATT TGTCGCCCGA GCTGGAGTGC AGCGGTGCAA TCACAGCTCA  
16251 CTGCAGCCTC GATCTCCTGG GCTCAATCAA TCCTCCACC TCAGCCTCCT  
16301 GAGTAGCTGG GACTATAGGC ATGTGCCCC AGACTTGGCA AATTTATGCA  
16351 TTTTTTGTAG AGACAGGATT TTGCCATGTT GCCCAGGCTG GTCTCGAACT  
16401 CCTGAGCTCA AGCAATCCGC CTACCTTGGC TTCCCAAAGT GCTGGAATTA  
16451 CTGGTGTGAG CCACCGTGCC CTGCCTGCTT GAGCCTTTTT GCTATTCTCC  
16501 CTCCTATGGG AAAAAGAATC GAGAAAGAGC AGTAGGCTCT ACTAGAGTCT  
16551 GGAGCATATC GGTTCTGAGA TTTCAGATTA AATTCTCTAT GTCTGCAGCA  
16601 AGTACAAATG TGAGTGATA TTCAGCCTCT TGAAGAAGAC ATCTATCCAT  
16651 TTCTTCAGTG AATATTTGCC CGGAGTCTTC TTCGTGACAG GCACTGTTGT  
16701 AGGCCCTGGA GGTACAGCAA TAAACAAGAC GAAGTCTCTG CCCTCCTGAA  
16751 ACTAACCGTT TAGCCAAGGC TTAGCATCTC TCACACTCAG GTCAACTTCT  
16801 GCATTTTAGA AATCTGTTTC AGGCACGCAT TTGACAAGTA AAGAGGTTCC  
16851 AAAAATACAT TAATAAGGAT GAAAATGAGG CCATTCTGAT ATTCCATTGC  
16901 TTGGCAAAAA TGCTTAATAT GGGAAATTA TATGGAATGG GTGCTGATGC  
16951 TGTCAAAGGT GGTGACATTC TGTTAGAAAA TTCAGTGATT TCAAAGAAGG  
17001 CCTCAGAGCT GCCTAGTTTG TAATTAGATA TTTTGAAGAA TCTGTGTTAA  
17051 TTAGGACTCT TTGGCTTGTG CATGTATACT GGGACGAGAC TGGAGTTTGT  
17101 GTCTCTCCCA TGATGATGGC ATGTAAATTA ATCTCCAAGG AATTGCAAGA  
17151 TGCTGAAATG TGAGGTACTT GAGTACACGT TGCATGAGTG CACACAAGTG  
17201 TGCCTGTGCC GGGATGCGTG TGCACGCGTG CACACACATA CACTCTAGCA  
17251 GATAGTAACT TTTTGCTACA CGTGATTTCC AAAGTGCTA AATTTACATG  
17301 TCTTTTGTAGT AGGAGGAAAT TAGGACTTTT GTCTGTTATA TGCCTTGCAG  
17351 TCTCTTGGCC TTCTCTGGGC TGCTGGGGCA GAATGAGGCC AACAGAGAAC  
17401 CACGGATGCC AGTCTGGGTC ACAAGGGCTT AAGGAAGCAG CAGATGGTTG  
17451 GACTGACTGG GGTGTCCATT AAGAATCCAG GGGTAGTGAG AGTCTTACCT  
17501 GGAGTTTGAG GCCGCACTTC CATTGCCAGG ACTCTCAGCT GAGTGGCTGG  
17551 AAGAGACCTG TAGGAGCCAT CTTCCAGTA TCTATCAGAG GTTCTGTCAC  
17601 TGTTTTAAGC TCGTCCTAGT GATCGAGGGA ACCTTGACTG GGGGTGCTGA  
17651 TGATTATTAA CAGTGGCCAT ACTCCCACGG CTGCAGGTGG AGATGAAGTG  
17701 TTTGATGAGA AGATGAGCAA GAGCTCAGGT GTGCCCCACC AGCTCTGCCA  
17751 CTCCCAAGCT GCCGAACCTA GGCATAACT TACCTCTCTG TGTCTGCTTC  
17801 CCAACTTGAG AACCGGAAAT GATAAAAGTA CCTGCTCCCT AGGGAGTAGG  
17851 TATGGTTAAA TGAGACCTCT TAAATGAGAC CATGCACACG AAGAGCAGAG  
17901 CACAGTGCTT GGCACACAGG AGGCACCTAA TAAACATCAA TGATGCTGCT  
17951 GCTGGTAACA CCCATTGCT GAGGGTCTTC AGTGGCTCAG GCACAGTACT

FIGURE 3F





Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

18001	CAGTGCTTAA	CATATAATAT	GTAATTTATT	CTTCACAGTA	GCCTGAGTCA
18051	CTTGCTTGTT	CTTCTGGTTA	ATATCCTAAT	GTTTAGCTCA	CCAACCTTAGA
18101	TGCTCATGAC	TTCCAAAGGA	TCTTCATGTA	ACAAGGACTC	CATATCTATT
18151	TTTAAAAAAT	AAGAGCTTTA	TTAAGATATA	ATTTACATAC	CATAAAATTA
18201	CCTATTTAAA	ATGTACAATT	CAGTGGTTTT	TAGTATATTC	ACAGAGTTGT
18251	GCAATCATCA	TCACTATCTA	ATTGTAGAAA	ATTTTCATGA	CTCCAAAAAG
18301	AAACTCCATA	TCCATTAGCA	GTCACCTCCC	ATTTTATCTC	TCCCAGTCCC
18351	TGGCAAGCAT	GAATTTACTT	TCTGTCTCTA	TGGAGTTGCC	TATTTTGGGC
18401	ATTTTCATGT	AATGGCATCA	TACAACAGGT	AGATATTTGT	GTGTGTGTGT
18451	GTGTGTGTGT	GTGTGTGTGT	GTGATCAGCT	TCTTTCACGT	AACATAATGC
18501	TTTCAAGGGT	TCACTCATGT	GGCATCCATA	CCTATTTTGA	ATGAAGAATG
18551	AAGACAGTCA	TCTGAGACAG	TTGTATTAGT	CCATTTGGAA	GATGAGGAAA
18601	CTGAGGCTGA	GAGTGTGTAT	GTAATTTGCT	CATGGCCACC	CATCTTGAAA
18651	GCGCTTGAGC	TGGGATTTGT	GCTCAGGTCC	ATCTTGGCTC	CAAGGCAAGA
18701	CCTTGGCCTT	CTCATCCACT	CACTGGTCTC	TGGTTGGACC	TCTGCATCAT
18751	GCTGAACACC	ATTTCTATAG	AGATGGGTGT	GTCCCACTGG	GTGTGGACAT
18801	CCTGAGGAAT	TGCTGTGGTT	GCAAGAACTC	TGATATTTTC	CATCTACCTT
18851	GAGGGGGATA	TGGTTTCATG	TCTGTATACT	CACATAGTGT	TGACCAGTCT
18901	AATTCCTTTG	TCCATTTCCT	AAGGGTTATG	ATATGAACTT	GGAAAGTTAC
18951	AGAAATGAAA	GTGATAGGAG	AGATATACTT	TCTGGGTTGG	AAACCCAGCA
19001	ACCAGTCACT	CAATATGATG	GAGGAAATGT	CATCCTTCTT	GTGTTGTCTT
19051	CAATAATAGA	TTGTAATGAA	ACACTATGGT	GTCTTAGTTG	GCTCCCTCC
19101	TGCCCGTGC	CCCCCTCCCC	AGCCCCAGTG	CTTTTCTGGA	GACATGAGAT
19151	GGTGTATCCC	TTCTCAGTT	GCTGTGATAG	CAGTGGGGAT	GATGGGGACA
19201	GGTATTCATG	GAAGGAAAAG	GCATGGTACC	AGCAGGCTCT	TGGGCAGGGA
19251	TGTGTGTCTT	CACTTGATCA	TCAGGGAATG	AGCTATCATG	ATGACAGAGC
19301	ACATCCTATG	AAGTACAAAT	CTTCCCCCAC	ATTTCCCCAA	AATTACTTTT
19351	GTCTGTCTCT	GTTCTCTCAC	ATGCTATTCT	AGGGAAAAGG	TCCCATTTTA
19401	TCATTTAAAT	GCAAATGAGA	TTTCCATCTT	GCTTCTACCA	AAGAAGGAGG
19451	AAAATAACCT	ATATAAACAC	CATGAAACCT	TACTTTGACT	TAAAACTAGT
19501	GGAAATTGGC	CCCTGAATCA	GATAATTAGC	TGAAAGTACA	TGAACAATTT
19551	AGGCCTCCGG	TAGTGGTTAT	GTGCTTGTTG	TATAGGAATT	TCGTCTACCA
19601	TGGATTTCAT	GGAAGTGGCC	CCATTCCCTG	TCTGGGTTTA	TGTAAGACTT
19651	TCAGCAGCAG	CCCAGTCTGA	TGTAGCAGAT	GTTCCAGTGC	CTGTCCCTAT
19701	CCTCCTGTCT	GCACCACTTC	AGCTCATGCT	GGCTCACTTC	TGACTGCCAA
19751	CTTGGCATT	TTTTTGCCCT	TTTCTTGACT	GAGCCTACTT	TGCTGCTCCC
19801	ATGGAAGGCA	GGAAGTGTG	GGGAATTAGT	GGACCCAGG	AGGAGCCCTC
19851	AACCAATAAC	TGATGGAAGA	TGGTGCCTAA	ACACCCCAAT	TCCCTCAGCC
19901	TTGGGTAGGG	TAACCTAGGA	ATATGGTTTA	CATGGGGTCC	CAGTTTCCTC
19951	TGTAGGAAAA	ATTCCACTGG	GCGACAGCAG	TAGCTAGTTA	GAAACTTCAC
20001	CTTTTATTGG	TTTTCTTGCC	TGCCCTCCCA	GCCCTTCTC	TTTTCTCTAA
20051	TTCCCTACTG	GCGATTCTT	CACTTCCCAA	ACAAACCACT	TGTGCTCAAA
20101	TCGTAATTGT	AGGATCAGCT	TCTGGGGAAA	CCCAAATGAA	GACATATGGT
20151	AAAGCTTCCC	TCTTTTCTTG	CCTTTCTGCC	TTTTGCCCCA	ATCAGTTAGC
20201	TTTGATGGTG	GGAGTGAGGG	GATGCTCAAC	CTCTCAGGCA	GGCTAATGGC
20251	TCTCAGGAGA	CACAATCCAC	AGCTGATTGG	CAGTTTCTC	CCCAAGATAT
20301	CTTCAGAACA	AACCCTGGTG	CTGGTGAGTG	ATCCATGCAG	CATGAAAAGA
20351	GAGGGTGAAG	CTTGATGAGG	CATGTTCCAG	TCTCATCAAA	CTATTTTGTT
20401	TCCATAATTT	TCCTTCTCAG	AAAAGGGCAG	AATCAAGTAC	AGTTGATTCT
20451	CATCATTTAT	GGTAATTCTT	GTGTTTTATA	AAGTTGCTGT	AAATCCTGAA
20501	TTAGCAAATA	GTGAACCGTT	GCTTTTAGGG	GAAATATACG	GTTAGGTTCC
20551	TGTGAGCCTC	TAGTCACAAC	ATTTTCTTCT	TCTTCTTCTT	CTTTTTTTTT
20601	TCGAGCTTAG	GGTCTTGTTT	TATCACCACG	GTGGGAGTGC	AGTGGCGCGA
20651	TCTTGGCTCA	CTGCAACCTC	CACATCCCA	GTTCAAGCGA	TTCTCCCACT
20701	TCAGCCTACC	GAGTAGCTGG	GACTACAGGC	ATGCACCACC	ATATCCGGCT
20751	AACTTTTGTA	TTTTTTGGTA	GAGGTGGGGT	TTCACCACAT	TGGCCAGGCT
20801	TGTCTCAAAC	TCCTGACGTC	AGGTGATCTG	CCTGCCTCGG	CCTCCCAAAG
20851	TGCTAGGATT	ATAGGCATGA	GCCATCACAC	CTGGTCAGGT	CACATTTTCA
20901	TCAACTAAAT	ACATAACCTT	GTTGTATGTG	TGTTTCTGTT	TAAAGACATC
20951	TTATTTTCATA	TATACTGTTG	ATTTGTTAGC	ATTGAACTCA	CAGCCACAGC

FIGURE 3G



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

21001 ACTGTGACTC ATTTCTGAAC AAAGTTATCT AACACACATA TTTTCTCCAT  
21051 AAGGCACCTC GCATCTTGCA CTTAGGAACA CTGGATAGCA CTTCAGCATT  
21101 GCACTTGGGG GTGATTTTAA ACAGTGCAAA CACTAACAAA AAAGCACAAA  
21151 ATGTGAAAAA CATGGCACTA AATAGATCAC AGAATGGACA CTAGCTTACA  
21201 GCATGAGCGC TCGAACAAAG AGGCAGAGCG CTGCCTTGTT CAACCTCAGC  
21251 TGAGGACATG TGCATCGGGT GACTCAAAC TTTTCTCACTG CTGTGTGCAT  
21301 GACTGCCAAT GACTGCAGAA CACCATGAAT ATTGATTTGA TTTCGGGGTT  
21351 ACAAATAAAT TTTAACACGT AGAAGAATTT GCAAATATAT ATTCACTGAA  
21401 TAATGAGGGT CAGTTGTCTT TCTTACTTCA TTACAATAAG ACTCTACTTC  
21451 AATTCAGTAT TTTTATTTCA TTTTATTTTG TTTTGTGAGAG ATAGGGTCTT  
21501 GCTCTGTGAC CCAGGCTGGA GTGCAGTGGT GTGATCCTAG CTCACTGCAG  
21551 CCTCAAACCTC CTGGGCTCAA GTGATCCTCC CGCCCCAGCC TCCCAAATAG  
21601 CTAGGACTAC AGGAACATGC CACCACACCT GGCTAATTTA TTTATTTTTT  
21651 TGTGGAGACG GCCTCCCTAT GTTGCCGAGG CTGGTCTCCA ACTCCTGTTT  
21701 TCAAGCCATC CCCCCTTCTA CTCTCCCAA GTACAATTTA GTATATTTAT  
21751 TAAACGTGTG TTCCAGGCTT TTTGATTGCT ATTGAGATGC TAATGAGATG  
21801 GTCCCTGTCA TTAAAGAGCG TCCATTCTGG TGGCACAAGG AACTCAAATT  
21851 ATGACACAAG ACAGAAATACC TACTCCAGAA GAGAGTTCTG TGAAAGCGTG  
21901 AAGGAGGGAC TTGAGTGTGC GATTCAGGAA GGACTTCACA TTGGAGGGAG  
21951 TTTTTTTAGA TAGGCTCTGA GAAACATTTT ACATTTTGAA CACCTCATAC  
22001 ATCATTGATA AAAAAAGAA GCAATTGGTG GAAACAACCTT CATTTCCCCA  
22051 GATCAAGTCT TCTAGGTTAC CTGCATCTGC ACCCACCAGT CCCACCTTGA  
22101 TTCCTCTCTA GATGAAGGGC GTCTTTTCCT ACCTAAGGCC GTCCCTTCTG  
22151 CTTATGCTGG GGACTCCTTT GCTCTTTGGG GCATCCTCTC TTCTCCTGGG  
22201 GAATTGATCT CTCCCTCTCT ACTTGAATAT TCCTACTAGT GTATACATGG  
22251 GCTTCCGTGT CATCCCCCTT GATCCCGCAT TGCCGCCAGC CACCCCTCAT  
22301 TCCTTTAGGC CTTTCACAGC AAAATTGCTG GAAAGGGTGG TCTGAAGTCA  
22351 CCATCACTAC TTCCTCCCTT CACATTCTTT CCAAGCCACC ACCACTTTAT  
22401 GGGGGCTGCT CCTTTGGAGG CCACTTATGG ACATTGCATC ACCTTTCTGT  
22451 CCTTTTATCT TAAGTACCAG TTAGGATGCT TTCAGCTGCC TGTTCAGAA  
22501 TGTCTTGATA CAAGTGACTT ACACAATACG GACATTGACT GTTAAGAGAG  
22551 TTACGTTCTC ACTGAACAAG GATGTTCCAG GCTTGGCTTG GGTGTTTCAT  
22601 AACACCTTCA AGGACCCAGA CTTCAGTTTC CTGCCCTGCC TCTCTTGATC  
22651 ACATCAGCAG ATATTATGTC GTCTAAAAAC AGGGAAGGGA GTGAAGTAGC  
22701 CTCTGTGTTT TTCCTTTTAT CATGGAGGAT GTTTTTTTTG CCCTGCAAGC  
22751 CCCATGCACA TTTCTTAAAT ATCACCCCTT AAATCATCC CTGGCAAAGG  
22801 GGGATGGTAT TATCCTTATT GGCTTGGACC AATTAAGATT CATCCCCTGA  
22851 GTCTGTGAAT GGGACGCATC TTCTTTGAAA TGTTGTGATT TAACCAAAT  
22901 TGGATCTGTT AAAGGAAGGG GGAGCGCTA AGGTGAAAGT GCCAGGCAGT  
22951 GTCTGCCACA TTTTCCCTGA CCCTTCTTAG CAATTTTGAC AGCCAGCCAC  
23001 CCCATCCTTC TTGAAGCACT TCATTTCCAT CACATGCTTT GTGACATCAT  
23051 TTCCTCTGGG TTTTATTTAT TTATTTATTT TTTTATTTAT TTGAGACAAA  
23101 ATCTCTCTCT GTTGCCGAGG CTGGAGTGCA GTGGCACGAT CTCAATTCAC  
23151 TGCAACCTCT GCCTCCCGGG TTCAAGTGAT TTTCTTGCCT CAGCCTCCCA  
23201 AGTAGCTGGG ATAACAGGCA TGTGCCACCA CACCTAGCTA ATTTTGTAT  
23251 TTTTAGTAGA GACAGGGTTT CACCATGTTG GCCAGACTGG TCTGAACTC  
23301 CTGACCTCAG GTGATCCACC CGCCTCGGCC TCCCAAAGTG CTGGGATTAC  
23351 AGTCATAAGC CACCGCGCCT GGCCGCTCTG GGTTTTCTTT TAACCTTTCT  
23401 GGCCACTCCT GTTTCCTGTT GACTCCTTTC TCATTGCTCT ACCTCTAATT  
23451 GGTGGAATGC CCAAATAGTT AGACCTGAGG TCCTTCTTGT CAGGATCTGT  
23501 AGGTTCTCCT GAGTGATCTC AGCAGTCCCT TTGTATCATC TATATGCCGA  
23551 GTATATCCTA AACTTGCTTC TCTCAAGAGT TTGTATCTC ATTGAATGAG  
23601 TTTCCCATCT CATTGATGGG CACCGCCATC TATCTGTATA GTTGCTTAAA  
23651 GTACGGGCAT GTTGATGAG TCCTCTGTTT CCCACCCCTG CCATTTTGTT  
23701 CTCCACTCAC CAGCAAGTCC TGCCGTGATC GATATCTAGA ACACATCCAG  
23751 AATCTGTTTG TTTCTCTCCA TTTCTGCTCC TGCCACCCCTC ATTCCACGCA  
23801 TCTTCTGTG TGGAGAGCTG ACAGCCTTTT TATCGGCCCTC CTTTCTTCTA  
23851 CCCTTGCTCC CAATAATTGA TCCTCCGTGG AACAGCCACA ATGATCTTTT  
23901 AAAAATATGA ATCTGATTTT TCTTGACCCG CAGCTTAAAA TTCTCTATCG  
23951 GTTCTCTTTT CCACTCGGCA TAAAATCTGC TTTCTGGTGC TGGCCTGCAG

FIGURE 3H



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

24001 CACCCTGAGT GCTGGCTGTG CTGACCTCCT TTCCAAGGCT GGTCTTGAGC  
24051 CGTCTTCCTC TAACCTATGC TGCACCTCTT TCTGCTTTCC TTGAATAAAA  
24101 CAAGCTCCTC CTGATCTGAG GGCCTTTACG GGACCTCTTT TTTTTTTTTT  
24151 TCTCCTAGGA TTATCTTCTG CCCAATTTTC ATAGGACTGG CTTCTCCTCG  
24201 CCTCTGAAAT CTCAGTCCAA ATGTCATGTC CTCCAAGAAT CTTTCTCTAA  
24251 CCGCCCACTC CTGCTGGGCA CCCTCTGTTG TAGCATACTG TTAGGAGTCT  
24301 CTGCATCATG CCTCTAACTC TTTGAAAAAA AGTTCTATTT GTTAGTTTAA  
24351 TAAACTAAAA CTAACCAAAAT TATAAACCAA ATTTCAAAAT TTTAAAAATT  
24401 AATAAACTAA AAACAGTACA ATGATATCTC TGTGAAGTCA AGGGAGGAGA  
24451 GAGTTTTAAG AAGGGGAAC TAATTAGCAG CACTAAAGGC TCTACAACGA  
24501 CTCAAGATAA TGATAATGAT GATGATGATG ATGGTGATAA TGACAGTGAT  
24551 AACTAACATT TATTGTTACT ATGAACCTGG AAGAGTGCCA GGCATTTTGC  
24601 GTACATTATC ATATTTAATT CTGACAGATT AAAAGTCTCG ACAATGCCTC  
24651 TACTGTCAAG GAATGTTATT CTCATTCTCA GAACACTGAG ACTTAGGGAG  
24701 GTCAGTCAA GTGCCCTGGCA CATGGTAGCT TTCGATTAAT GTTTGCTATG  
24751 TGAGTAAATA AATTTCCACA AGGTCCTGGA GCTGGTGAAT GGTAGAGTTG  
24801 AGAGTCTAAC TTAGATCTGA CCGAATCCAA AGTCCGTATT TGTAACCACT  
24851 GGTCTATATT TGCTCAGATG AAGACAGAGA ACCCCTTAAC AGATTGAGAA  
24901 AAGGAAGCCT AATATAGGAT AAATGATTTC TTATTTATTT AAAACATGAT  
24951 AAATAAAATT AATTTTCAGT CCAAAACCTT CTGAATTTTG GAATTCTGGA  
25001 CTCCATTCAT TCAATTCATT TGAAGGCATA GGTGAGTTCT TTAAGAAG  
25051 CATTAGGAAT GAATCCAGAT TGAACAATTT TCTTATTAAA ATACCTTAAA  
25101 GATGCATTCT TATGATGAGC CAGGTTTCATT GTCCAGGAAA GCTATTAAAA  
25151 CTCAGTCTTT GTGATGAGTG CAGTAAGAAC CCCACTTGAA TTACGTAGTG  
25201 AGCAGGTGCT TCCTAAACCA AGTTTCATGT TTGACAAGCT AGGAGAGAAC  
25251 CCAGTGTTAA ATGTTTTCTG GCATGTTGGC CTTTGTTTTC TCATATTATG  
25301 GGACATATGT TTAGTGCTTG TGGTATATGC TTAGCCTACT CTTGTAGGAT  
25351 GACTGAGACC TCACACAACA TCAAGGACAT AGTCTTTGCC TTTGCTGAGT  
25401 TCAGAGTGTA ATTGGAGTGA TGAACATAC ATGTGAATAA ATGCAAAGTC  
25451 ACAAGTAAAG ACAGTTAATG TGATTGATGA AGGACGTGTG GCACAAGATG  
25501 GATAAGAATG AGAAGTAGAA GAAGTAGGTG GTTTTGAAC TTCGTTACTC  
25551 AGGGAAGGGA ATGTATGTGG ATTGGTGGAG AAGAGAGGGG AGGAAGATGG  
25601 TTTTAAGCAC TGGTAAGATG GTGCATATTT GCAAGTTTTC CTCAAGGGAT  
25651 AGAAAGGGCT GAGACCCAGT GGGGAGGAAT CAGAGGGGAA TCGGCAAGA  
25701 GAATTAGGGA AATGAGAACT GTCAGTAGAG GAAGTGAGAT TAGGCTGGCC  
25751 GGGAGCTATT TGGGGTTTCT GAGTACTGAT GTTACATGAA GGAATATTG  
25801 TGAGGGATAA ATATTGCAGT GGGTGCATTT GAGAGCAAAA CCAGATTGAG  
25851 GCCCAGTTAG GGAAGGGTTT CTTAAACGTC GGCTTTTCCT ATGCCATCTT  
25901 CACTTTTTTAA TTTTTTGTG GCCATATTTA GATATCAGCT GTGTCACTAT  
25951 ATACTTAATA TTTTCTGTAA GTTGATTTC CTTTTAAAAA CTTAAATTTA  
26001 GCTTTGCCCT ATGCAATAA CTTATCATG TTTACTGAAT GCTTTTCTTT  
26051 AAATTTAACC CTTAAATCT TAAATAAATG TAGCCTTACC CCAAGCACTA  
26101 GTACCTATGA AATCATAGGT ATTCTGTGCT AGTTCTATTT TTCCAAATGC  
26151 ACAGTAAATT AAACCTGCGG CCATTAAAAA AATGTTGCAT ATGTGTGTTA  
26201 CCTAATGCTG TCTTGTGTAC CTATGGTTCA TGTGCTACAC TTTTGGGAAT  
26251 ACCCAAGGCA CTGTTACAGC TTTCTAACTG TGACATGATG AAACGTAATA  
26301 AATAGGAGCC AGCTACATTT ATTAGATACT TACTGTGTGC AAGCCCTTGT  
26351 GATGGAGGAG ATGAACATAT GATGCAGTCC TTA CTCTTAA TAGATTGGA  
26401 ACAAAGCAGA GAGAGAATGG CACACCAATG AGAAAGTGAG ATGTAGGCCT  
26451 GACAGGTCCA ATCTCTGCCA TGTAAGCAG CTTTTAGATA AGCCATCTGA  
26501 TATCAGCTCT GCCACTGGTC AGCTGAGTGA GCTGCCACTC TGGAACCCAA  
26551 GGGTAAGCTC TCCTCAAATT CAGTTCACCT CAACAAGTAT TTGCCAGATA  
26601 CTATATGACA CTTTTCGAGA TATTAAGGAA ATTAAAGTGT CTTAGGGAGT  
26651 GTTAAACCAG AAACCAAGT ATGAAGTGG AGACAGAGTG GAATAAGGAC  
26701 TGTAAGAGAG ATGCAATGAC ATGTATTGG TACTTACGGG AGGAAGAGTT  
26751 TATAGCCAGC TTTGGGGACC AGGGAAGGCT TCCTAGAAGA TGTGTCATTT  
26801 CAGATGAACT TTAAGAGATG GGATCATACA AAAGGCAGTG ATGGAGGGTG  
26851 TTCAGCAGAG GGAAGGGCAT CATCATGACA ACAGAGAGGG AAACCTGAGG  
26901 ACCTGTGAGG AGAAGAGCAA GTCTCCGTTG TTTGGTGGTG ATGTTGGGGG  
26951 CATGAAGGTG GAAAGGAAGG TTGGGGCTT ATGGATACCT TACATGCTAG

FIGURE 31



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

27001 GTTGAACATG GATTTATTTT CACAGATGAT CAGGAGCCAT GGAAGGCTAC  
27051 ACTAGCTGGG CGTACATAAT TTAAGTCAGA GGGACAAATA ACTGCAAGCT  
27101 AAATACTCTT AGGGAGAAAC TGCAGCAATC TGGGTGAGAA ACAATGAATT  
27151 TGTGAGTAGT CACCATAGCA AAGGTCTGGG CTAGGGGGGC ACTGGAGGAG  
27201 TGAAAAAGAA AGGTTTAAAT AGTCACTGAG AGGGCTGAGG ACCCACTAGC  
27251 CACTGGCATA GTGGAGTCAA TCATTTCTCC GAAATTACGA GGAGGAGAGG  
27301 TGGGGCATCT CTAAGGCGTG GAGCAGTGGA GGATGGTGAT TGTATGGTAG  
27351 GGGAAAGAAG ATAATGATCG CAGTTCCAGT AGGTGATGGA TGAGGAGGGG  
27401 AAGGCGTTTT ACAGATTATT CACTGGGAAA GAACAGAGGC AGTCCACACT  
27451 GTAGTTAATT CCTTTTATTT TTGTCTTTAA GTATACTCAA GGATAAATAG  
27501 CCATACAATT TCTGTTTGGC TTTTCATGCT GGAGAGGTGC AGAGGTTGCA  
27551 CTGAACGTGG ACGATATTAA TTTTGACTTG TACAAGGGTA CTGTGTCTCTG  
27601 GGAAGTGGCC AATAATATTC TATGAAAAGT CATTTGAGTA ACTCATTTTTT  
27651 ATACATAAAA TAGGTAGTTC CTTTTCAATT TCCTTATATT TTGGGATACT  
27701 TACATGCCAG GATTCCCTCTA TTTCAATCTC TTGTTTCTA CCTGAAAAGA  
27751 TCTTACGTTT GGTGGCTGTG GATGCAATTC TGCCTTTACA CAGAAATGAC  
27801 TCTCCTGGGC ATACCTTTAG GCAAAGAGCA GATGAACGCA TAACGAGCAG  
27851 CTTTGAGATT TGGTATTCCC ACTGCAGAAC GAAGAGAAGG GTGGCCCACT  
27901 GGAAATTTCC TCAGAGAAAC GTCTAAGTCT GCATCTCCCA CATCCATTCA  
27951 TTTTCATGCA TAGTTCCTTC ATCTGTTGTT TTTTAATTTA TCTATTTTAT  
28001 ATAATGTCTA TCTCTGTAGT ACCTGGGATG AAATGCGCCA ATCCTGACTG  
28051 CAATGAATAG GGCAAAAGCAA TTCTTGGGAG CTGCTCTGGG CAGGAAGTGG  
28101 AGGCTGAATT CTTTTAAAGG AAAATTTTTT GGGGATCGTG ACTCACTGGC  
28151 CTTTCATCCCC ATCATCACTG GGATTGGTTA AGTGCCAGGA AACAGCTGGA  
28201 AGTCGACAGA CAATTTAGGG TACAAATGAA AGGAGAAGTT ACTGTTAAAG  
28251 GGATCTGTAT TCTCTGTTAT CAAAACCACC AACGCTGTCT CCTAGCTAAT  
28301 AGGAACCAAA ACTGTGCCCT GAGAATGCTG CCAGATGTTT CTCAATAGGC  
28351 ACGTTACGTT TTATGGTCCT GGATGCTGCA CTTAAAAATA GTGTCCAATT  
28401 TCAAACTCAC TATTAAGTAG ACACTAAACT TTTGGAATCT ATTAATGGAT  
28451 CTAGATCTCC AACCTAGTGG CAACAAATGT TTGAAGTGAA GTTTATTGTT  
28501 TTAAGTGAAT TTTAAATGTG AAATGATGAG TATTTAACTT CAATTTTTTT  
28551 GCATGATTTT TCCACTGTGG CAACTTTCCT TTTAAATGA TAGAACCTCA  
28601 TTATAATGTG GCTGATAGGA AATCTGTTTA TTCATGCATA TATTTATTCA  
28651 TTTACAAATA TTTATTTACT ACCTACCAGG CTCTGTGCAG TACTCCGATA  
28701 AACTGGAACA AGAGCCATAT TTTGTACTTT GTATGTTTCT CCAAGAGAAA  
28751 TGTTCTATTG TACTACATTA ATTCTTAGAT GCATTTTGA ATTAATTTACC  
28801 CTTCTGAAAT CAGAATGTGT CTTACTAGCA ATATGTCATA ATTTAATTGG  
28851 CAATTTAAAT TTTCAAGAGG CACATAAGAT AATGATGTGT TTTGTAATTG  
28901 ACAATGCTCT GATTTGATAG AAGATATTTG TACAATACTA TATTGGTACC  
28951 ATGCTTTGGC CGATGTAATG GTCCTATTTG GAGTTCACCTA CTAATGTTAA  
29001 GCCTCTAGTT TTAGGCGTTG ATGTTGGTCC AGGGACACTA GGAAGTCAAAT  
29051 GCCCAGATGT CCAAGGCTAA GAGAGAAGAA TCAGAAGGTG AATGCAGAGC  
29101 CCAGTGGGTT CAAGCCATGT AGACAATAAT AGCAGAATGG AGAGACATTT  
29151 TCCGATGCCT CATGTCTATG CATCTTCTCT CCCTTTCTGG CCTGCCACAT  
29201 AAATTCATTG CAGTGCAACT CTGCCAGATA TCAGAATAGA GCAGGAGGAA  
29251 AGAGAAACAG CTGCAGCATG GGAGATAGGA CTCATACCAA GAGAGATTAG  
29301 GCTCGGTGTG TATACCTAAT GATGGTAAAG TGAACAACCA GGTACAGTG  
29351 ATAGCAGCAA CACGCATTTA TCGAGTGTCC TATCCACTTC AGAAACACTA  
29401 TTTTTAAATG ATAACAATTC TACAAGATAA GTATTCATTG ATCATCAATA  
29451 TTATCCTTGT TTCATGTGTA AAACGGGGC TCAGAGAGGG TAAAAAAGTT  
29501 GTCCAAGGTC ATACAGTTAG GAAATGGTAG AACCAGGATT CAGGCTTTGC  
29551 TCCATGGGGC ATCAAGGTCT GCTCCACTTC CAGTGTGCCA TGCAGTTTCC  
29601 CCAAATCTGA GAACATGCAT TTACTTTATG TCCGGTTATG TGAGGTCTCA  
29651 GAAGCCAGAG AGGGCCAGAG TATGAAGAGT TACATAAAAG AGCTTCAGAA  
29701 TCTAATAGGG TTCTGAGCA AGATTCTACC AATACCTGGA ATAACCTCCT  
29751 CTGTGTATAG CCCAGGTGCA TGGACTAGAC CAGATTGGGA GGGGATGGTT  
29801 GCCCAGCAGG CCCAGAGAAG GAGCTGGTAG CATGGTGAGT TAAGGGCTGA  
29851 GGATCAAGAA TTTGTTAGTT TAATTAGACC CCCCAGAG CAGAAGTGCT  
29901 GTTGTAGTTA AGACTCTGGA ACTCAGTGAT AGGATATTTT AATAAAGCCC  
29951 ATGATCTCAA GAGGAAGTTG CTGAATGGAT GAGCTCACAG TCCATAGTTG

FIGURE 3J



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

30001 GGAGCTAATG AACAACTTTA ATTATGTTTC TGATACTAGT GGAGGTGTTC  
30051 TCCTGTCAAT GAATTCCTTT TAGATTTTGA CCCCATGTAG ATCTCAAGGA  
30101 AATAAATAAA TAAATAAATT AGTTAATTAA TTTATTTATT TTGAGATGGA  
30151 GTCTAGCTCT GTCGCTCATG CTGGAGTACA ATGGCACGAT CCCGGCCCAC  
30201 TGCAACCTCT GCCTCCCTGG TTCAAGCAAT TCTCCTGCCT CAGCCTCCCG  
30251 AGTAGCTGGG ACTACAGGTG CCCGCCACCA CGCCTGGCTA GTTTTGTAT  
30301 TTTTAGTAGA GATGGGTTT CACCATGTTG GCCAGGCTGG TCTCAAATC  
30351 CTGACCTCAG GTGATCTGCC TGCCTCGGCC TCCCAAAATG CTGGGATTAT  
30401 AGGTGAGCCA CCATCTCAAG GAAATTAAAT ATGTTTGGGT TTGCTACTGA  
30451 AGAGCCAAGA AGAATTTTGC AAATTATGAG AAAGAGCCCA AGCTTTCAAA  
30501 TGTCCAAGGT GGCTATTCAT ATCTGGGAAC TAGGAAGAAT TCCAAGTTGT  
30551 TCACCTATGC CTGTTTCTAA TGCCTTCCCA CAAGGGTGAC AGAGCAAAGT  
30601 TGATTTCTAT TAATTTAGGG GAAATAATCT CCACTGAATG GCCAGAACAA  
30651 TAACCTTTCT AATGACACAC AGAACAACGC TACTGTCACC CTTGTCACGG  
30701 CTGTACTGTG CATCATAGGT ATTTATTAGG TACTTAAATA CTTGTTGGC  
30751 TCAAGATAGC TCACAAAGAG GGTCAATAAG TCTCGTTTTC TGTCTTTAG  
30801 AGTTTCCAGT ATAAGAACAA ATAGATGAGC AAACACATAT AAGAAATACA  
30851 TTGAAGAGAA TTAGAATATT CATGAATGTA CAGTGAGAAA TTCTTAACCT  
30901 ATACAGGGTC ATAGTTGACT TCATTTAAAT ATTTTCTAAG GGTAGAACGC  
30951 AACATTATTA GAATACCTGA GAGGGGAAGG TTGGGACCGT GCCCTTGAAG  
31001 TAGCATATTA AATTAAAGAG AGGAAAGAGA AAGCTGGCAA TATTCAAGT  
31051 CTGGAACCTGA TCCTTAAGGC AATACTTTCG TGCTGGAATT TGTATTTAA  
31101 AGACCAGCCA GAATCTCTTG TGGTCCCTTG CCCATGTAGC CCTATGAGGA  
31151 CGTTTGTATA TTTGGATTGC TTGAGGCCTG AGTGTCTATG GCATAGGCAG  
31201 AGTCATTGGA TCAACCCATG TATCTGTTGC TTGACACATT GCTCTGGATA  
31251 CATTGTACCC AAGAAATCAG CCCAAGTGGG ATCCAGCCCA AAAGAGAATT  
31301 GTTGATTTTC AAAACTGAAC AGTCCAGGCA AAGCTCAATC TAGGGCTCAG  
31351 ATCATGTCAT CAGGACTGCA TAGTTCTTCA TTTCTTGATT CGTCTTCTTT  
31401 GCATTGCTCT ATTCTTAGGC AAGTTCCATC TTGGAAATCC TAAGGTGGCT  
31451 GCCGAAGGCT GCAGACCCCT CTCTGTCTTC CAGATTTACA TCCTTCAGGA  
31501 GAGCGAAAGC TCAGTTCCTT AAGGCTGAAA CAAAAGTCTT GCAATGGCAT  
31551 CTTTTTGGTC CTGATTGGCC TGTCTAGGGT CAGATACTCA TTCTTTAATT  
31601 ATCATGGTGG TGATTGGGGG AATCGAATGT GCTAATTGGC TTTGCCTGGG  
31651 TTGTGTGCTT CACTCATGGA ACCTAAGAGA GAAGCCAGT GAAGCCCAAC  
31701 TCAAGGGCTG AGAGTGGGCT GTAGTGGTTT CCCTAAACAA AATCGTACT  
31751 GTTGACATAA TATGGCATGG TCATGGATGC TGAGAGAATG ATGTAGAGAA  
31801 AGGGTGGATG AGAATGGAAG CAGGACTAGG CACAGTGGTT CACACTTGTA  
31851 ACTTCAGCTA CTTGGGAGGC TGAGGCAGGA GGATCGCTTG TGGCCAGGAG  
31901 TTAGTGACCA GCCTGAGCAA CATAGTGAGA CCCTATCTCT AAAAAAATTT  
31951 ATTTTAAAT TAGCCAAGTG TGGTGGTGCA TGCCTATAGT CCCAGCTGCT  
32001 TGGGAGACTG AGGTAGGAGG ATCGCTTCAG CCCAGGAGTT CAAAGTTACG  
32051 GTGAGCTATG ATTGCACCAC TGCACACTAG CCTGGGTAAA CAGAGCAAGA  
32101 CTCTGTCCAT AAAAAAGAAG AAGGAGGAGG AGAAGGAGGC TAAGAAGAAA  
32151 GGAAGTGGGT ATGCTAGTTT GGAGGTATTG AAGTCCAGGC AAAGAATCAT  
32201 GGTGGCTTGG ACAAGCAGAG TGACTGCTGA GATGGAGAGT GGTGGATGGG  
32251 TTTGATTTCT AGTTTGGAGA TGGAATCCAC AGCATTTGCT GATGAAATAC  
32301 ATGTTGAAGA TGGTAAGGAA AATAATTAAA AATGATTCCT AGGCTTGTGG  
32351 ACTGAGTAAC TTGGGAGGAT GGTGGTAGCA TTTCTTGAGA TAGGTAAGAA  
32401 TGGAGGGTTT TTATTATTTT AAAATCAACT ATGCTATTCT AGCTCTGTGG  
32451 GATTTGAGAA GCCTGTTAAT ATCTGAGTGG GAATGTCAAT TGGACAGTTG  
32501 GAGACAGGAG TCTGGAAATTT AGAGGGTAGA GCTGGAAATA TATATTCATG  
32551 GATATATGAA TCCATAATGA GAAGGGGTGG CTATAGCAGT TTTTATTTTT  
32601 ACTTTTAAAG CCATTTAACT AGTTTATTAA ATTGGCGGGC CTTCTTGAGA  
32651 GTACAAACCA TAAATCACTT CATTTATCTT CAACTCCTAC CTTCACTCTT  
32701 GCCCTGTGAG GCCAACCTG GATGATACAC CAGAAATACC TCACAGCTTT  
32751 TCCAGGCACT TTAATAATCA AATCAAGTAA AATAGAAATA AAAATTGTAC  
32801 TTTTTTTTTT AGATATTCAA AAGTCCAGTT TTACATGAAT CAAAACATCA  
32851 ACCTCTCATC CAATTCAAAG CTCTCTTCA GCCGGGTGAG GTAGCTTGTG  
32901 CCTGTAATCC CAGCACTTAT GGGAGGCCGA GGCAGGCCAT CGCTTGAGCC  
32951 CAGGAGCTTG AGACCAGCCT GGTGAAACCC TGTCTCTACT GAAAATACAA

FIGURE 3K



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

33001 AAAC TAGCTG GCGTGGTGG TGTGTGCTG TAGTCCCAGC TACTCGGGAG  
33051 GCTGAGGCAC AAGAGTCGCT TGAACAAGTG GGGAGGACTT TGCAGTGAGC  
33101 AGAGATCGTG CCACTGCACC CCAGCCTGGG TGACAGAGCC AGTCCCTGTC  
33151 CAAAACAAAA CAAAACAAAA AAACCTGTAA TCCCAGCACT CTGGGAGGCC  
33201 GAGGTGGGTA CATCACCTGA GGTCGGCAGT TCAAGACCTG CCTGGCCAAA  
33251 ATGGTAAAAAC CCCGTCTCTA CTGAAAATAC AAAAAATTGG CTGGGCATTG  
33301 TGGCGGGTGC CTATAATCCC AGATATTAG GATGCTGAGG CAGGAGAATT  
33351 GCTTGAACCC GGGAGGCAGA GTTTATATTG AGCCGAGATC GCGCCATTGC  
33401 ACTCCAGCCT GGGTGACAGA GGGAGACTCC ATCTCAACA ACAACAGCAA  
33451 CAACAACAAA ACAAATCAC AAAGCTCTCC TTTCCCTGTA GGCCAGGCCT  
33501 GGCCTGAGAC ACTGCAGATC AGCCATGGGA AAGGGAAGGC GGGGGCCGTG  
33551 GCTGTTCCCT TCCCTCCTT GTGCACACTC CTTTCTGCT GGCTTTGCTG  
33601 CTTTGGCTC CACCACAGTC AAGGGGAGG GAGAAGGTGA CTAGAAAGCA  
33651 AGGTGTTTT ACTTAGCTGG TGCTTCTTAT GGTTCCTTCT AGTCATGAAA  
33701 TAGTCTCTGT CTTGCAGTGG TCCAGCTTTT GTGAGTTCTT CGCCACCCTG  
33751 TGAAGACCCC CAGACTTTCC TCTACAGACA TGGATGATGC CCTCCCTGGC  
33801 TGGTCTCTTA TGACACCCCC GGCCTCTCAG CTTCTGCCTT GAGTGTACCC  
33851 TGAACTTTTT TTCTCAAGTG GATGGACTTC TTGGGGAAGG CTTTTTTCTG  
33901 AAGGCTTTGA TGTAGCTTCT GACCCCATCC AGTGCCTACT TGGCCCAGGA  
33951 GAAACCATTA GGCATCTTTG TGCTGCCATA TATGGGAAA GCACGTGACT  
34001 CCACGTGTC CTACCTCCT CAGCCTGCAT TACAGGCCAA ACGCTGCGCA  
34051 CCCATGTCTG ATTTTCCAG GGCCGTCTCA TTGCACACCT CCAGAGGGCA  
34101 TCATTCACAT GTGTTCTCCT AGAATTGCAC AGTTAATGTG GCAGCCCTGA  
34151 GTTCAGACAA ATCTCTCATG CCCCTACCTG TAGCAGTGCA TTCTATGAAG  
34201 TATGCAGTTC AGCAGGCACC CAGCTGGGGT TCCAGATGCT GAGACCCCTT  
34251 TCTGCCAACC CCTCTGATCT CTGAGCAGTT CTCTTTCTGC TCCTTCATTT  
34301 GCCATAGTGC TGCAATGCTA TGTGTTCTTT TCTGCTAAGA AATGCTTTTT  
34351 CTCCAGCGAA TTCTCTTATA TGGCTTAGAG ATCATATGCA AGCTCTGCAT  
34401 TGATGGATCC TCAGTCTTCA GTTTTGAGAG ATCTCAGTAT AAACCCCAAG  
34451 ACAACAGGAA AGGGCTCACT TAACATTGCC TTGTAACAGA GAAACCCTCT  
34501 CTTTGAATGA AAGCTGTCAG GGAAGCTCAG TATATAAAGC AGGTGACATG  
34551 GTGCTCCATT GGGGTGGTGG GGAACGAGGG GCGGGGTGCT CAAGGCTGGC  
34601 TTCTGTGCAC AGTTAGAAAA CTCCTGTGCC TGAGAAAGCC AACCCTGGTT  
34651 TCCACGACCA GGAGTTTCCC ACTATTTACA GTTCTGCAGT GTTTGGCTTC  
34701 TTCATGATTT TCTGCTGGTG AAAGCAATAG TTTGTACAAG ACGTGTGGGA  
34751 ATAAAAATAG TCCAGGTGCT GCCCTTTTCC GCGGCAGAGG GACCACCTGT  
34801 CAGGCTGCCC TAGTGGGCCT CTTCCACAG CACGGTTCTG CCACTTGAAT  
34851 ACCTCCCTGC CTGTTTCTG ACGCTGACCT AGAAGCTTCT GGTGAATGCT  
34901 TTGCTTCTGC ACAACTTGCA TGGTGGGTGC CTTTTTTTTG TGAATGAAAA  
34951 GGTCTTCTC TGGCTCTGAA TATAGCAACT GCATGACCTG CAGAAATAAT  
35001 TTTGTTGTTT CTTGTGGGCC ATGTTAGCTT AGGGCTTTG ACCTTATAGG  
35051 GACATTGCA AGAATTTTCT CAAAAGGTTT TCATCTGTAA ATTTTCATCT  
35101 TTGCACATAG TAGAGAGCTT AGAACGTCAG TCTCGTTCCA TCTGTTATAA  
35151 GTTTTGAGGC TTTGGGCAAA GTACCTAACT TCCCTGTGCC TCGATTCTC  
35201 CATCTGTAAC ACTGGAGCAA GAGTAGAACC TCCATCCTGG TCTGCGGTGA  
35251 GGCTTAGTGA GGCATTCAT GTGAAATGTA CACAGTGCC TGGCAGAGC  
35301 AAGCACCCAG AACATGTTAC TAATTGCATT AGTTTCCTCT TGCTGCTATA  
35351 ACAAGTTGCA CAAACTGCAT AGCTTAAAC AACACAAGTT TATCATATCA  
35401 TTCTGCATGT TAGACTTCCT AAGTGGGTCA TATGGGGCTA AAATCAAGGT  
35451 GTCCACAGGG CTGTTTCTCT CTGGGGGCTT TAGGGAGAAT CTTCCCTTG  
35501 CTTTTTCCAG CTTCTAAAG CTGCTCATGT TTCTTGCTC ATGGCTGCAC  
35551 CACTGTAACC TTTGCATCTG TCCTCACATG CCTCCTCTCT CTGGCCCTCC  
35601 CGCTCCCCCT TGTGATTACA CTGGACCCAC CCAGATAATC CAGGATCATC  
35651 TCCTGATCTC AAGATCTTAA TCACATCAG AAAATCCCTT TGTCGTGTAA  
35701 AGTAGTAAAG TAATGTGCTC ACAGGTTC CAAGATCAGGA CATGGACATC  
35751 TTTGGGGGAC CGAACATTAT CCTGCTGATC CTACCAATTA TTTAAAAAGT  
35801 TGTCTGTAA GTATCTACAG TGTGCCTCTG CTGTGTGCTG GGCATACAAG  
35851 GTGAATAAGA CACAATGCTT ATGCCAAAAT AGATACACAA GCACGATGCC  
35901 CTTAGTAATA ATCACAGTAG CTGACATTTA CTGAGTATTT ACTATGTGCC  
35951 AGGCATTGTG CCAGGCACTT CAAGTGAATT ATCTTGCTGA AATCTCACCA

FIGURE 3L



Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

36001 TGGCACTAAG GGAAAGGTAT AATTTCCATT TTAAGGATAA GAACACTGAG  
36051 GCTTAGAGAG CTTAAGTATT TTTTCTCAAG GCCACAGAGC TAAGGACATG  
36101 AGCTCAGGTC TATCTGATTC TAAGCTTGAA CAATTCATCA CAGCCCCCTT  
36151 AAAAGATGGG TGGGTTTACC CTCAGGCTCT CTTCTTCACT GTGTGTGTAG  
36201 CTAAAGATTG GCCAGCTTAA GAGGAGCAGA TCACACAAGC AGCTATGATG  
36251 AGGGCCAGTG GGCAGAGCTC CCAGAGGAGG CTGATGCAAC ATTGCTCCCA  
36301 TTCTTGCCAT CACCCAAAGC TGCAAGTCCA TGGCCCTGGC ACTTGGGCAA  
36351 ATGTTGCCTT GTCTTCAAGT GAATCTAAAA AACTGTGTAA GGGCATGATT  
36401 AATTCCACCA AACTGGATTC TCCCCAAGAT CACTTACACC AACTAATGG  
36451 GGCCCTGCTT CAGCCTGAGG AACTGTGTGA ATAAAAGAGA AGAAGCCCAG  
36501 TGAGATTCTT CTTTCATGAT TAATAGAAAA ACCACCTGGT GACTTTAAAA  
36551 GGCAAAGAAG GAGGTACATT CAGATGAGTC AGAAAGAAAA GGCAGCATTT  
36601 GAATCCTAAA GGCCATGTTA CTCTTGATCT TCTCCAGGAT TTCTTTTAGG  
36651 GAAATGGAAA TTTTACATG GAGGGCAGAG GTGGGGTGAA GGTGACTG  
36701 TAGACTGAGT GTCTTATAA TGAGACCAAC CCGGGTGCTG GGTGAATCA  
36751 TATATTCTAG ATGGGAAGTT TATATTCTAA TGAGGGAGAC ACACAGGGAA  
36801 TGAGCAAATC AGTACAGAAT ACAATCTCAG CTAGCACTAA GTTGCTTTGA  
36851 GGAAAATCAA GCCAGGTGGT GGGCTAGGAA GAGACTGGAG GGGAGAATGG  
36901 CCCTTCTGCA GTGGGGTGGT GAGGAAGGAA GTCTCGCTG AGGAGGCAGC  
36951 ATTGAGCACT GAGAGGGAGC TACCCTGTAA GGCCCTGGGC AAGACTGTTC  
37001 CAGGTTGAGG GAACAACACA CGTGCACTCC CTGAGACTAG AGCTAACTTG  
37051 GACAAATGAG AAGACCACTG TGGCTGGCG GTATTGAGGG ACAGATGGTA  
37101 GGAGATGAAG GTGGAGAAGT GGGCCATGGC CAGAATTTGG GGATCTAAGG  
37151 ACAGGAGTTT GGGAGGTTCC TCAAGGAGTT GTGGGAACCC TCTGGGAAGG  
37201 TTTTCAGCGT GCAGTGGAAG GATCGAATTT ACATTTTGGC AGGCAGGTTA  
37251 GGACACTGTT GTGCAGAAAC AACAATGGCT AATGGGCTGG TTGAGGTGGG  
37301 AATGAAAGAA GTGGTGAAT GAAATCAGGA TGTATTTGGA AGGGAGAGTT  
37351 GGCTGGACTG GCTGTGGGTG TCAGGGCAGG GTGGAGCCAT AGACTACTCT  
37401 GGATTTTCTG TCCAAGCCCT GGATGAATAG CAGTACCATG AATTGAGATG  
37451 CACAAGCCTA GGAGAAGAGG CAGATTTGGG ATGTGAATGT GTATGAGTGA  
37501 AAACAAAATT TCTCTTTGAA TCATGTTCAA TGTGCTACTT GGACAAGCAG  
37551 CTAATTGGAC AACTAAGTGT AAAAATTAAA TAGTGAACAA TGAGTGAAC  
37601 AAAACGTTAG AGCTGTACAT TTTGCTTTAG AAGGGGCATA CTTTTTGCTT  
37651 TAGAACGTGT GGCAATCTAA TACAAATGGC CAACAAACAT ATGAAAAAAT  
37701 GCTCAACATC ACTAATGATA AGGGAGATGC AAATCAAAAC CACAAAGCGA  
37751 TACTGCCCTA CCCCTGCAAG AATGGCCATA ATAAAAAAT CAAAAAATAA  
37801 TACATGTTGG CGGGGATGTG GTGAAAAGGG AACACTTCTA CACTGCTGCT  
37851 GGGAATACAA CCACTATGGA AAACAGTGTG GAGATTCCCT AAAGAACTAA  
37901 AAGTAGAACC ACCATTTGAT CCAACAATCC CACTCCTGGG TGCATACCTA  
37951 GAGGAAAAGA AGTCATTATA CGAAAAAGAT ACTCATACAT GCATGTTTCT  
38001 AGCAACACAA TTCACAAATG CAAAAATATG GAACCAGCCC AAATGCCCAT  
38051 CAATCAATGA GTGGATGAAG AAATTGTGAT ACACACACAC ACACACACAC  
38101 ACACACACAC ACACACACCA TGGGAATACT ATTCAGCCAT AAAAAGGAAT  
38151 GAAATGATGG CATCTGCAGC AACCTGGATG GAATTGGAGA CCAACATTCT  
38201 AAGTGAAGTA ACTCAGGAAT GGAAAAACCA AACATTGTGT GTTCTTACTT  
38251 ATAAGTGGGA GCTAAGCTAT GAGGATGCAA AGGCATCCTC ATTGGACTTT  
38301 GGGGACTTGG TGAAAAGGGT GGGGGCAGTG AGGGATAAAA GACAGCAAAT  
38351 TGGGTACAGT GTACACTGCT CGGGTGATGG GTGCACCAAA ATTTCAACAAG  
38401 TCACCACTAA AGAGCTTAGT CATGTAACCA AACACCACCT CTTCCCCAAA  
38451 AACCTACAGA AATAATAATA AAAAAGAAGT TGTGGCAATC TAATTGATGA  
38501 TAATTGATGG TAGCATCCAT GTTGGGGAAG GAAGGAAACA ATGCCAAACA  
38551 CTATGCTAGC TGCTTCACAT GTATTGTTTT TCACAGGGTG TAAGGCTTGA  
38601 GAAGCATCTA GTGTCCTGTG TCAGATTATG CATTCTGGAG GCAGATTGCT  
38651 AAGGTTCAAG TCCTGGCCCT GCCTGTTAGT GGCATGTTCT ATGCTTTGCT  
38701 TGCTTATCTG TAAAATGGAG TAATAATAAT ACCTTGCTTG TAAAGTTATT  
38751 TTTACATTTA AATGAGTTAA TGCATGTAAA GCACTTGGA TAGTGCCTGG  
38801 TATTGTAATA AACAATAAAT GAGCAATTTT AATGTTACTA TTTTATTTTC  
38851 TCCGTAGGGT GCACCTCAAT AGATGGAAGA GTAGGGCATG TGATAAGGTT  
38901 TGGCTGTGTT CTCATCCAAA TCTCATTTTG AATTGTAGCT CCCATAATTT  
38951 TCACATGTTG TGGGTGGGAC CAGGTGGGAA GTAAGTGAAT CATGGGGGCG

FIGURE 3M

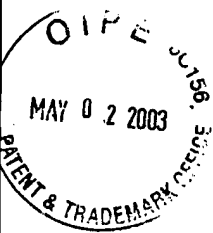


Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

39001 GTTCCCCCAT ACTGTTCTCG TGGTAGTGAA TAAGTCTCAT GAAATCTAAT  
39051 GGTTTTTATAA GGGGTTTTTCC CTTTCACTTG ATTCTCATTC TCTCTTGCCT  
39101 GCTGCCAAGA AAGACGTGCC TTTCACCTTC TGCCATAATT GTGAGGACTT  
39151 CCCAGCCACA TGGAACGTGT AGTCCATTAA GCCTCTTTTT CTTTATAAAT  
39201 TAATTACCCA GTCTCAGGTA TGTC'TTTATC AGCAGTGTCA AAACAGACTA  
39251 ATACAATGTG TTATAACAAG AGTGTTACTT CAGAATCTTG TTTTAACTTG  
39301 TGTATTAGTC AGTGTGCAGG ATGCTTGGGT TCTGTCCTGG TTTTGGCCAT  
39351 GTTTCCATTT TATGAGCAGT TCCTCTATCA CAATATAGAT GAATGCCTCT  
39401 ATCACAATAT AGATGCAGCA ATAAGTTGGG ATTGCTGCAT AGCCATCCCA  
39451 ACTTATTGGC ATAAAACAAG CATTTTATTA TGCTCAGATA ATGTGCTTCA  
39501 GGGATTTCATG CAGGACACAG AGGCGATGGT TTGTCTCTAT TCTGCAACGT  
39551 CTGGGGCCTC ACCTGGGAAG ATGAGCCTCA CCTGGGAAAT CTACAGGTGT  
39601 CTGTGGGGTT AGGGGAGGGG GCTGAAATCA ACTGGAGGTA TCTTGGCTCA  
39651 TGTGACTGGT GGTGATTCTT GGCTCTTGGT TGAGATCTCA GCGTGGCTGT  
39701 TGGCTGGAAC ATCTGTATGT GATCACTGTG TTTCTCCACA TGGGTAGCT  
39751 TGAGCTTCCT CACAGTGTGG CAGCTGGATC CTAAGAGTGA GCATCCCAAA  
39801 AGAACCAGGC AGAAGCGGTG TGGTCTTTCA TTATTTAGCT TTGGAGGTCA  
39851 CATAGTGTCA CTTCTGCTTT AGTCACAAGC CTGTCCAGAT TCAAGGAGAG  
39901 GGAACATAGG TTCGATGTTC TCACGGGGGG AATATTAAAG TCACATAGTA  
39951 AGGAGTATAT GGGATAGGAG AGATTGTTGT AGCTAGTTTT GGTAAATACA  
40001 GTCTTCCAGG AGGCTTAACC TGTGGGCCAC TTATGAGCCT GTCTGGCTTA  
40051 AAGGATCCAG TACACATCTA AATTTGGACA TACTCTAAAA TCAGGATCTC  
40101 TTTTATTTAT TAAAGAACCT GAGTAATCTT AACCTAAGTT GTATTAAAAAT  
40151 TCAAAGATTG ACTCCTTAGA ACAGCTAAGC TTTCGTTTAT TTAATGGGCA  
40201 CTGATTGAAT CTTGACTCTG TGCAAGATCC TGTGCTAATG GCTGTGGGAG  
40251 CATATTGAGA TGCCACAAGA AGTTGGCATG CTAAAAGGTG AAGACAAATA  
40301 CAGATGGCTT TCAATTAACCT AGTCTCTGGA GAGACAGAGG CCACTCACAA  
40351 CCTCTAATGA TAGTTAAAT AAAACTTATT CAGGCCAGGC ACAGTGGCTC  
40401 AGGCCTATAA TCCCAGCACT TTGGGAGGCT GAGGTGGGCG GATCACTTGA  
40451 GGTCAGGAGT TCTAGACTAC CCCGGCCAAC ATGGCGAAAC CCCATCTCTA  
40501 CTAAAAATAC AGAAATTAAC CAGGCATGGT GGTGCGCGCC TGTAATCCCA  
40551 GCTACTTGGG AGGCTGAGGC ATGAGAGTCG CTTGAATCCG GGAGGCAGAG  
40601 GTTGCAGTGA ACTAAGATGG TGCCACTGCA CTCCAGCCTG GGCCACAGAG  
40651 TGAGACTCCA CCTCAAAAAC AAACAAACAA ACAAACTA TTTAAAACAA  
40701 GACACAAAGT GAGTTTAAAT CAAACTTATT TAGTTAGCAT TGCATTTAAT  
40751 GTTCAGGAAC ACATGTTCCA TTTTGTAGAG TTCATTAAAT ACAACTAGCA  
40801 GTTATTTAAG TGCTTACTAG AGACATTGAA TATTCTAAGC ACCCTGTGAG  
40851 TATTATGTAT TTAATTTGCA CAATACAGTG AAGCAGTTAC TTTATCGTAC  
40901 CCATTTTATA GATGAGAGTG AACAGTAGAG AGGTTCTCAT TTTGATGGTT  
40951 AATATTGTCA ACTTGATTGG ATTTAAGGAT GCAAAGTATT GTTTCTGGGT  
41001 GTGTCTGTGA GGGTGTGTGA GGGGAGATTA ACATTTGAGC CAGTGGACTG  
41051 GAGAGGAAGA CCCACCCTTA ATCTGGGTGG GCACCATCCC CTTGGCTGCC  
41101 AGCACGGCTA AAAAAAGCAG GCAGAAGAAG GTGGAATGAG CAGACTCGCT  
41151 GAGTCTTCCA GCTTTTCATCT TTCTCCCGTG CTGGATGCTT CCTGCCCTCC  
41201 AACATCAGAC TCCAAGTTGT TTAGCTTTTG GACTCTTGGA CTTACACCAG  
41251 TGGTTTGCCA GGGGCTCTCA GACTTTTGGC CACAGTGCAC TGTCGGCTTC  
41301 CCTACGTTTG AGTTTTTGGG ACTTGGGCTG TCTTCTTGC TCCTCAGCTT  
41351 GCAGATGGCC TATTGTGGGA CACCTTGTA TCATGTGAGT CAATACTCCT  
41401 TAATAAATTC CTTTTCATAT GTACATCTAT CCTATTAGTT CTGTCTTCT  
41451 CGAGAGCCCT GACTAATGCA GTCATGGAGG CTGGCGTTTG TACCCAGGGT  
41501 CTCCCAGTCC CCAGGTGCAT GCTCAATGTG ACAGGGCTAG TTAGTGCAAA  
41551 GCCGGCCTA GAATCCAGGT TCTGGATTTT CTTCTTGGTG TTCTTTCTC  
41601 TAGACTTGAG GTTTTGAATT GTGTTCTCTGA ATCTTTTGGG TCCTAAAAAA  
41651 GTCTTGGGAC CTGCTGCAGG GGTGAGAAG AAGCAAAGCT CATGTGACTC  
41701 TAGGCCCTTA CTCCAAAGTC CAACCAAGTA GCATGCTTTG AGGTAAATTA  
41751 TATTGTGTGA AACTTAATAT ATGATACATA GTATAATGCA ATACTTAATA  
41801 TATATTTAAT ATATTTGTAA CATACAAAAT ACAATATCCA AGAGCAGTAT  
41851 GGAACACCAA AAGGTGTTC GACTTTTTTT TTTGAGACAG TCTCGCTCTG  
41901 TCACCAGGCT GGAGTGTGGT GGTGCAATCT CAGCTCACTG CAACCTCTGC  
41951 CTCCCTGGTT CAAGCAATTC TCCTGCCTCA GCCTCCTGAG TAGCTGGGAC

FIGURE 3N





Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

42001	TACAGGTGCC	CACCACCATG	CCTGGCTAAT	TTTTTTTGT	ATTTTGGTA
42051	GAGACGGGT	TTCACCATGT	TGGCCAGGAC	GGTCTCGATC	TCTTGACCTC
42101	GTGATCCACC	TGCCTTGGCC	TCCCAAAGTA	CTGGGATTAC	AGGCGTGAGC
42151	CCCTTCCTTC	AAATGGAATT	TTATATCTGT	GTTTACATTT	TCTGCTTAAA
42201	GTTTGAATTT	TGTTTAATTC	AATTGAATTT	CCACTTAAAA	TGTAAACTTT
42251	TGAAACCCAC	ACCTCTGACA	TATTCCACAT	TGCTGTTGGA	TATTTTTAGT
42301	TTAAAGATTT	GGCCTGTAAG	CTGTATCGGT	ATCATTATTC	TAACCTCAGG
42351	CTCAAGGTCT	CAGTACTAG	TTAAAGTCTT	TTCTACCGGC	AAATCTGTAT
42401	TACCATCTAC	TGTGGAAGAT	AACCTCTAAA	GTGCCCATGT	AAGCACAAAT
42451	CCATAAACT	AAAAGTCAAA	GAAAAAGAG	AAAGAGTTTA	TTCCACTGTT
42501	TAAAAGTTCA	GTTTGATTTA	GATCTTATAT	CTCTTGGGTT	TTCTTGACTG
42551	ATTTTTTACA	TAAATGTGTC	CCAGAAAGAG	TGATCATATC	GTGATCTTTG
42601	TTCCCAGTTT	TCCTTTTCCA	CATCAAGTTT	TCCTGATGGA	AAGTGATTTA
42651	AAAAAACCTT	TAAAGTGTGA	TAATCACTCT	CTTCTTTAGT	AGACAGTGGA
42701	GTTTAATAGA	TGCATACAGC	AGTTGTTTAC	TTGTGATGAA	AAGAAATGTG
42751	AATTTTCTGG	TGCAAGGACA	TTTCTAGCTC	ATGTCTAAAT	TGCAGAGAGA
42801	CCACAGTTTG	ACATAGTGCT	GAAGCAGGTT	GTAAGAGGTA	GGGGTACAAT
42851	GTATGTCTGC	ACAGGTTGTG	CACTATGCGA	CTGTGAATGG	TGTCTTCTGG
42901	AATTGTCTAT	GCGGAAGCAC	TGTCAGGAGG	TCGTGGATTG	CAGCCTCTGT
42951	TGATTTTTGT	GCATGGGAGA	GCTTGATACC	AAGCCTCAAA	GTACTAGGAA
43001	TAGAAGGTA	TTACATGCTG	TAATTTTCAA	GGTGGTGCCT	TTCTGTACCT
43051	CCATTGCTTT	TAGTTTAGGG	CATTTCTTCT	GCAATCTTTG	GAGGGTTCCCT
43101	AGGAATAAAA	AAGTAGCTAG	TTTGAGACAG	TGTGCAATTG	TGCTGAAATG
43151	GAGGACCATG	GGGGTAGATG	TAGTTCCCTT	CATGCCAGTA	GCTAATTGGC
43201	TTAGTTTGCT	GATTTGTGCC	AGGATATTCC	CTAAAAATAG	GTGTCTTCTA
43251	AGCCTCAGCT	TTGGGCCTTG	AGGTATGGCA	TGGCTATCCG	CTCTCTGCTC
43301	CTGCTGAGCT	AAATGCAGTC	CTGAATGCCA	AATATTGAGA	TTTGGAATTA
43351	TCAAAGGACT	ATTAGCATCA	AATTGAGAAA	CTCAAGCTAA	ATTTGCAAAAT
43401	TAATACAAAA	TCATGAACTG	AGCTTCTCTT	CCAGAGAACC	TCTTGTAACA
43451	GAACCTGAAG	GTGGCAGGAT	GTCTTGATAG	AGCGTGGATT	TTAGAGCTGG
43501	ATGCATGCTG	GGCTTATATC	CTGGTTCCAG	CATTTGCCTT	GGGCAAGTTA
43551	TTTACAACCT	CTGGTTGAGG	TGGTTGGACT	AGTTGATATC	TATGATTCCCT
43601	TTTTAAGTAA	ATAACTATTA	GTTTTTTCAT	ACAGTATAAT	TACTATATAA
43651	CAAACATCTT	CTTCTTTGAT	TTCAATCATG	CATTCAAAGT	ATTTATTAAA
43701	TGCCCTCCAA	TGCCGGACAC	CATACTAGGT	ACTGGGTATA	TAAGAGTGAA
43751	CCAAATGAGC	AGGGTTTCTG	CCCTCAGGGA	GTTGATAATC	TAGTGGGGAA
43801	GGTGTGGGG	ATGATGGTTC	ATCAATAGTA	AAGAAACAAA	TAATATAACT
43851	ACAATCATAC	TTGCTGTGAT	AGAGAATAAT	GGGGAGGACC	CTATGTATTA
43901	GTGGGGGGTA	CTCTAGAGAA	ACAGAAACCA	TAGGATACAA	ACACACACAC
43951	ACACACACAC	ACAAATGTGT	CTTGGGTATA	TATATATCTA	TATGAGAGAT
44001	ATATGTATAT	ATGTACATAT	GTATGTGTGT	GGGGGGGATG	GGGGATATAT
44051	ATATATATAT	ATATGGAGAG	AGAGAGAGAG	ATTTATTTAT	TTTAAGAAAT
44101	TGACTCACAC	AATTATGGAC	AGGTCCCAAG	ATCTGCAGGT	GAGTCAGCAA
44151	GCTGGCGACC	CAGGAGAGCT	GATAGTTTAG	TTCCAGTGCA	AGTCTGAAGG
44201	CCTGAGAACC	AGGAAAGCCA	ATGGTATAAT	TCCCCTGAAA	AGCCGATATT
44251	TCAGTTCAGG	TCCAAAGGCA	GGAAGAATTC	TCTCTTACTC	AGGGGAAGGT
44301	CAGCCATTTT	GTTCTATTCA	GGCCTCCAAC	CGATAGGATG	TGGACCACCT
44351	ATGTCGTGGG	AGAAATCTGC	TTTACTCACT	CTGCTAACTT	AAATATGAAT
44401	CCCATCAGAA	AGCACCCTCA	CAGAAGTACC	CAGAATAATG	TTTGACCAAA
44451	TATCTAAGCA	TCCTCTGACA	CAGTCAAGTT	GTCACATAAA	ATGAACTATC
44501	CTAGGCTACT	TAGAGTAGTC	AGAAGATACC	TCTCTGACAT	GGTAACATTT
44551	AAACTGAGAC	CCAAAGAATG	GGAAGGAGCC	AGCCGTGGAA	GAATGGGGGA
44601	CAGGCCTTCC	AGGCAGAAAG	AAACTGAGTG	GTAACCGAGT	GGAAACTGAA
44651	TGGAACCTGG	AGTCCAGAGG	GAAAAGGGGC	ATGTTGTGAG	ATGAAATTAG
44701	AGAGGGGACA	GAGGCTTTAC	TGTCAGACCT	TGGAAGCCAT	GATAAGGGGC
44751	TTGCATTTTA	TTCTAGATGC	AACGATGAGA	GGCACTGAGT	TTGAGCACCT
44801	TGGAAGCCAT	GATAAGGGGC	TTGCATTTTA	TTCTAGATGC	AGTGATGAGA
44851	GGCACTGAAA	AGTTTGAGCA	AGGAGGAATG	TGAGAGGATT	TATGTTTCGA
44901	AAAGATTTT	CTGACTGCTC	TGTGGGAGTG	GGTGAGAGTG	GAAAGTGGGG
44951	AGACCTGAGA	GAAGGCTATG	GCTGGAGCCT	AGTAGGGAGC	AGGTAGCCTG

FIGURE 30



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

45001 GATGGAGGGC CAGGGGGACA GAGGGAAGTG GATTGTTTGC AGGTCTATTT  
45051 TGGCGGTAGA AATGAGAGAA CTATTGGGGA GGGACAGGAC AAGAGAACAG  
45101 AAAGTAAGGC TGCCTCTCAG GATCCTGCCT ATTTGGCTTG AACGGTTTGG  
45151 GTGAACATTA CTATCATTCG GGGAGGTGAG ACTTCCTTTT TTGGTTGGGT  
45201 CAACTAACAA GCGCAATTTT CACTTACTAA GCATGAGACA CACCTGAGGT  
45251 ATCCAAATGA AACTCAATAG TAGGCAATTG GGTGTGTGAA GCTGGAGTTC  
45301 CAAGGACATT TTGGGTCTGG GTGTATAGAC CTGGGAGCCA TCAGCATGTA  
45351 GGTAGGGATT ACACAGGGAG AGGATATAGA ACAAAGGGG TGCAGAAAAT  
45401 AACCCACGGA AGTCCAGTGT TTAGGCAGAA GAAGAAGTAT CTGCAGAGTG  
45451 GATTTAAAAA GACCCAACGA GAGAGGGTGG AGGAAAGCCT TGAGAGTGTG  
45501 ATATCACAGA GGCTGTAAGC AGGGAGCTTT TTAAGAAGGA GCAAGTTCTC  
45551 CTGTGCAGAA TATTGCTGAG AGGACAAGTG ATGTGTGGCC GTGTTGGTGT  
45601 CCCCTGTGTC GGTAGCAGAG ATCGTTAGCA GAGCAGTTTC AGTGGAGTGA  
45651 CAGGAGAGGA AGACCAAGTAT ATTTTATGCA GTTTTAGGAT GGGTATCACC  
45701 CAGTGTATTA GTCCATTTC ACGCTGCTGA TAAAGACATA ACCAAGACCG  
45751 GGAAGGAGAG GTTTAATTGG ACTTACAGTT CCGCATGGCT GGGGAGGCCC  
45801 CAGAATCATG GTGGGAGGTG AAAGGCACTT CTTACATGGC AGCAGCAAGA  
45851 GAAAATGAGG AAGAAGCAAA AGTGGAAACC CCTGATAAAC CCATCAGATC  
45901 TCATGAGACT TATTCGTTAT CATGAGAATA TCATGGGAAA GACTGGCCCC  
45951 CATGATTCAA TTACCTCCCC CTGGGTTCCCT CCCACAACAC ATGGGAATTC  
46001 TGGGAGATAC AGTTCAAGTT GAGACTTGGG TGGGAACACA GCCAAATCAT  
46051 ATCACCCAGT TTAGTACTTC ACTATGTTTT TGGCCAATTA TGTTGGGTAG  
46101 GGGATGGTTG TGCTCCTCCT GTCCCTTACC TTAGAGCTGG CAGATAAAAT  
46151 ACCAGATATC CAGTTAAATT TGAATTTAG AAAACTTTTT AAAAAAGTAT  
46201 AAGTATATCC CAAATATGTC ATGGGATATA CTTACCTTTT AAAAAATTTA  
46251 TTGCTATTGT TTATCTGCAA TTCAAATTTT ACTGGGTGTC CTGTATTTTT  
46301 GTTTCCTGAA TCTGGTAGCA CACATTGAAT TGCACCCTTT AAAATGGCTA  
46351 GAATAGGGAA TTTTATGTTA TGTGCATTGT AACACACACA CACACACACA  
46401 CACACACACA CACACACACA CGTATCTGGC AATTCTCCCT TAACTAAACT  
46451 ACCATGTAGA AGCTACCATG CGATGCAGTC TATTTCTAGG TTTAGCCACA  
46501 AGGGTCAATA AGAAAATCTG ACCTCAAAGG AAATTATGTC TGGTGATGGT  
46551 TAATGCTTCT ACTAAATTC CTTAGAGCAT AGGATGCTGA GCCCATAGTA  
46601 GGACCTCATC AAATGCTGGT TTGATAGAAA TTGCATTTGG GGAAAATTAG  
46651 CAGCTGTTGA TAACTGAATG GAAAGAAATG AACTACCCTG GTACCTGTGG  
46701 TACAACTTAA AGAACACCAT GAAATGGGCC TCATGGGAGG TTCTCAATGA  
46751 ATTCAGTGGC GTGGCACTTT TGGGCATGCT TTTGGAACCA AGTACTTACT  
46801 CCATGTGCCT GTGAGTTTGG CACCTCTCAT GGCAGCCCAA GTGCAACTGG  
46851 TTTCTGAGGG GCCATTAAAA ATCTCCCAAT GGCAGACAAC TCTCAGACAT  
46901 GCCTGCAAAAT TCCAAGACAG CCAGGCTGAT CATCTGCTAC TTTAATTGGT  
46951 TATACCAGTT TTTATGCCTT TGTTTCTCCT CTTTCTGTG AGGTGGAGGA  
47001 AACATAACCA CAAGACTGTT TCCAGTGACC TCTTCAGAGG CAATTTCCTA  
47051 GCAATTAAGT ATGGGTTGAA TCCAAAGTGT ATTGATGAAT TAAATCTGT  
47101 TCCTTGGCTG AAGATTCTGT TCCTTGGCTG ACACCTGAAC TCAAAGGTTA  
47151 GATTGAACTA TCTAGGAAAA CGGTTTTTCT CTTGTGTTTT CTGTCAGGCT  
47201 TTGCTGTTTA CGAAGATCTT GCATCAACAC TTAGCATTCA CTCACATGGC  
47251 AAGCTTGCAAT GTGGTACTTT CATTCCACAT TAATTTAGGG AACTCTACTA  
47301 TGTGCCAGCA TTCAATATCC AATTTGTCTT AGATTTTCGA ATAGTGTCCC  
47351 ACAATTTTAT AACTGGGGAG TTCCTTGAAT GGAAATATGT TCACAGTGGC  
47401 TGCTTAATTG TGACTAACCC ATCACATAGA GACTGCTTTG GTAATAGATT  
47451 TGATTCTGAG GGTCTAGGAG AAGGGACACT TCTCATATGG GGAAGACGGG  
47501 ATTAATCCTT GAAAATGATA CTGAAGCCAA CTTCTGTACC AGTATAGCAG  
47551 CTTAGCAGAC TTCTATATGA TCCATGTAAG GGTCTGTTTG CTCTCTGAGA  
47601 TTTTGGGTGC CTTCTCTAGC CCCTGAGTGC TGGGCTTCTT CTGAATTCCA  
47651 TAGGGGTGGA GGTGAAGGTA CCGCCAGCTC TCACCCAACT CATCCATCCC  
47701 TGGACAGCAG GGATCTGCT CATCACCTG GTGCCTCCGA TGCCTGAAGC  
47751 ACAATAGGCC CTCAGCAAAC ATTTGTTGAA TTCATGCCAT GAACATTAAT  
47801 CGAGCCCTTT TTATACACTG TGCCTGGGA TTGGGACCAT GGAAAATTTA  
47851 GAGAGGAAAA GGTCCACCTT CAAGGGGCAT CTAGAGGAAC TTATCCTCTA  
47901 GCAGGAGAAA TTGCTAATGA GAAAAGGTAT TTTGGGGAGT GGAGTGAGGT  
47951 GTTGGTCTAG CTGGCAGGTT CAGCCTATGC TCAGTGGCTC TCTGGTATGG

FIGURE 3P



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

48001	AAAATTCCTC	AGAATGTTGA	TTCAGCCAAA	GATTTCTCTG	GCAGCACTGA
48051	CTCTTGCCCT	CCTTCGGCCA	CATTTTATTC	CCCAAACCTA	GGTGTTACTG
48101	GGAAGAGACT	GAGCTGTTTT	ATTGAAGATA	ATTGACTTTC	CCAGTTTTTA
48151	AGTAAGTCTG	TTGATTCCTC	GAAGACTTCA	CTAATCAGAG	TTATGAATAT
48201	TTCAAAAACA	CTTCCCAGTC	TTCAGATGAA	TGGATTGTGA	GGTTTTCTAC
48251	ATTGCTGTCT	CCCTAGCCCC	ATGAGGAATA	ATGTGGGTAT	CCTTTTCCCT
48301	TTTAGGTTTC	TCTCTTCCTC	TAACCTGCGC	CCACTCCCAG	CCTCTGATAG
48351	ATGCATTTGC	AGTAAATCAC	AGAAATGTTG	CTGATGTCAG	CAGCACTGAT
48401	ATGCATTAGA	GGAGCCACTT	CAGAGGAAAT	TACTCAGAGG	GTGATGCTGA
48451	AATGCAAAGC	TGTTTGGTAG	GGTATTTTGT	AGAAACTGTT	TTCTCCCTTT
48501	GATGGATCTT	GTTTATTTTT	TTTTGACTTA	GTAGGCACAG	TGAAGGAATA
48551	ACCATCCAAA	TGTTTTTTTT	TTTTCCATTT	AAGTTTTGTA	TAGGAGGTTT
48601	TGGTGACTTT	GAAATGAACC	AGGAGCACTG	AGCAGCTACA	CTGACAAATG
48651	GAGATGGCTG	AGGCTGCTTG	CAAAGCAGTG	TGTTGGGGTG	TGGAGCCTCC
48701	ATGTCAGTGA	CCTGGGGAAA	GGCAACAGTG	AGGGCACACC	TCATTCTACA
48751	GAAATGGTTT	AAAAATATAC	ATATGATACC	CCACTTTTGA	TGCACACAGA
48801	CTGTGCTGTT	TAAATGCTTT	CGATGGAAAA	TCCTTTTGTA	AAGTACACGT
48851	CTATCTTGCA	GAGTAGGATT	TCTGTATATG	ATCTCAGGTT	TGTTTATAGG
48901	GAGGTACACT	TGGATGTCTT	CATGACATTT	ATCATGACAG	CTGTAGCTGA
48951	GCAGAGAAAG	AGGGCAGGAC	TGCCATGGGG	CATCAAGGGC	CATTTGAAGA
49001	AGGAAATGGT	GGACTGAGAG	TGATAGCGAG	CTGTGAGGCT	GCCTGGTTTC
49051	TGTAGCAGTG	TTCAGCAGCC	TGTGACTCTG	AGCAGAGAGA	AGGAAATATTA
49101	TACAGGGATA	TTTCCAGGTA	GCTCCAGGAA	AAGACAAAAG	GGGAGGAAGT
49151	TGAGTCTGTT	AGCTAAAGAG	CAGTGTTGAA	TATGGGATCC	AAGTTGGGTG
49201	GAGAAGAGAA	AGAGAACACA	GGGAGGGTAG	GATGACAGGA	GAAAGTAGAG
49251	GCAGGGTATG	ATGTGGGAGC	GATGAGGGTA	GCAAGCTGGA	AAGAGAGGAT
49301	GATCTAGTCA	ATGTCTTAGT	GTGCCTTAGG	GCTACTATAA	TGAAATACCA
49351	TAGACTGAGT	AGCTTTTGCA	CAACAGAAAT	TTATTTCTCA	TGGTTCTGGA
49401	GGCTGGGAAG	ATCAAGATAT	CAAGGCAGAT	TCAGTGTCTG	GCAAGGATCT
49451	GGTACCTGAT	TGACAGACAG	CTGTCTTCCT	GCTGTGTCCT	CACTCGGTGG
49501	AAGGACCAAG	AGATCTCTCT	GGGTTCTCTT	TTATAAGGGC	ATGAATCCAA
49551	TTCATGAGGG	CTCAGCCCTC	ACCATCTAAT	CACCCCCCAA	AGCCCCCACC
49601	TCCTAATCCC	ATCACATTGA	GGGTAGATT	TCAGTGTGTG	AATTTTGGGG
49651	GACACAAAAA	TTCAGACCGT	AGCAGTAATC	GCTTCAACTG	AGTATTGAGA
49701	CAGTTCTTGT	GGTAACAAGG	TTTAGGGTGT	GGCCATAGGG	AGACTCAGCT
49751	GTAGTGGAGC	TGTTGGGGCT	GTGCCAAGGT	CACCCAGATC	CGTTTTGTTC
49801	TGTGCACCTG	TCCTTTAGCT	TCTGGGGGCT	TCTCTCTTTC	TGGCCTGTAC
49851	CTACAGCCTT	TTTCAGAGGA	CTCTCCTTGG	TCTACCGGAG	CCTATTTTCA
49901	GGATGTTCCCT	AGGAGTTTTC	TGAGATGGAG	TCTCCCTCTG	TCGCCCAGGC
49951	TGGAGTGCAG	CGGCACAATC	TCAGCTCACT	CCAACCTCCA	CCTCCTAGGT
50001	TCAAGCCATT	CTCCAGCCTC	AGCCTCCCAA	GTAGCTTAGA	TTACAAGCAT
50051	GCACCACTAT	GCCTGGCTAA	TTTTTTTTTT	TTTTTTTTTT	TTTGTATTTT
50101	TAGCAGAGCT	GGGACTTCGC	CATGTTGGCC	AGGCTGGTCT	CAAACCTCTG
50151	ACCTCAGGTG	ATCCCCTGCC	TCGGCCTCAC	AAAGTGCTGG	GATGACAAGC
50201	ATGAGCCACT	GCGCCTGGCC	ATCCTAGGAG	TTTGTATCAC	CCACTCCTTC
50251	ACGGTTTGTC	TGGAGGGATC	TCCTAAATAA	ATAACTCACA	AACAAATTCT
50301	CATCCGGGAT	CTGCTTCTGG	GATACCTGCC	CTGAGTTAGT	GGTTGAGATG
50351	GAATGGAGAT	GATGGCAATG	GTGATAAATT	CAAGGAAATG	GGAGGCTTGG
50401	GTCTTGGCTG	GGTTGTGTGT	GGGATGCTGA	AGTCACTTAG	GAGGGAAACA
50451	GGACCCAGAG	AGAAGGCTGC	AGGAAACTGG	GGGAGCAGCC	AGGTCTACCA
50501	CTGATGGCCA	CGGGGAAAGA	GTAGGAAGTG	GAGGAGCCAG	AGGGCTGGGG
50551	TCTCAGAGGA	ACTGTCGGGT	TTGACACAAG	AATTTGGGGT	ATTGGTTTTC
50601	CAGGACAATG	TGACCCTGAT	GTTGTGGGCG	AGGGAGACTG	AACAGCCCCT
50651	ACCCAGAGT	CACACTGACA	GCACAGTGTC	CTCAGGGAAA	GCCCAGGTAT
50701	CAGGAGAAAA	GCGCGAGGAA	GGGGCCCTGA	AGAGGCTGGG	GGCATGAGGG
50751	AGTCTTCAGA	TCTTCAGCAG	GGGCCCCTGA	GGCATCTTTG	GAATGGTTTG
50801	GGGTAGGGGT	GAGGGGAAGG	TTGGATCAGA	GGGGAGGAGG	CTGAGAGCAG
50851	AAGAGAGAAC	AAAGCTACAC	CAAGTGGCCT	CACTGGCCTC	ACACTTCTCA
50901	GAATTGGTCC	CTTCAGACCC	GGTGGTGGGT	GGCTTGGCAG	CCTGGATGTG
50951	GGGTGTGGAG	ATTGGTACTA	CTCCTGGCAC	ACAGGGGGCA	TGCATTGGTT

FIGURE 3Q



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

51001 GAATAAACAA ATGAATGACA CATCAAGTTT GTAGATGCCC CACCTTTTCA  
51051 TCATTCTGAA CCATTGTCAC TTCCATGTAT TTTATGGTCT GATAAATATG  
51101 GAATTAATCG AAGTACCTCT AGCTATTGTG TATCACCATT ATTGGGTGGG  
51151 ACACAGCGAA CAGATTCTTT AAAGCTAGGG AATTATGCAA TAGGACATGT  
51201 TACGGAGTTA AGCCATAAGA TCCTTTTTTT TTTTTTTTTT TTTTTTTTTT  
51251 TTTAGATAGA GTCTCACTCT GTCACCCAGG CTAAAGTGCA GTGGTGCAAT  
51301 GTCGACTCAC TGCAACCTCC TCCTCCCAAT TCTCCTGCCT CAGCCTCCTG  
51351 AGTAGCTGGA ATTACAGCGT GCGCCACCAT GCCTGGCTAA TTTTGTATT  
51401 TTTAGTAGAG ACAGGGTTTT GGCATGTTGG CCAGGCTGGT TTGGAAAGGA  
51451 TCTTTCTAAT AGGCCAAAA ATATTTTCA GTTTTGCTTT CTACTGTGGA  
51501 TCTGTAGATC CACAGTATAA CTACTTATGG TCTATTGCT TGTGATTGCA  
51551 GATACTGAAG GAGTTTGCTG GGAAGGGAGA AGTGTGTGTG GAAGAAGAGG  
51601 GGAGGGCTGG AGAAGTGAGA TGAGCCCTGA GCACACGGGA CATTGGAGGC  
51651 CAGGGAAGA ACCATGGCGG TGCTTGTGGA GTTTTAATAG GTGCAAGCTG  
51701 GGAATTTTCA AAGGCTCACC TGGCTGCTGA GTGGAGCCTA GGGCAGGGTG  
51751 GGGGGTGGGG GGAGACCCCT CCGGGAGCCA GTGAGGAGAG ATAAGTCTT  
51801 TTGACAAGAC ACCTGGGAAA GACATCTGGA AGGAATGGCG TTGACAATAA  
51851 GATTTAAAC CTTTGGCCCC AGGGAAAGGG GATATTTTGA GAACATGAC  
51901 TGCTTGTATT ACTTTTAAAT CCAAGAGGAG GATAAAGGTC TTTCTGTAT  
51951 AAAGTGCCT AGTTAATTTA AATTGTGGAG GAAAAACTT AGGGCAAGAG  
52001 ACAGAAATAG ATATTGAGGA AGCATTTTGG AAAAAAGAC AAGGAACCCC  
52051 AGCTGTGGCT GTGTGCACCT TTAGGGCCTT GATCATGGAG GCAGGATAAA  
52101 GAAGTCCATC TCGTCAACAT GGCGGAGTCA GAGTCTATTG GGAGAATCAC  
52151 GAGGTAGGCA GCTCTAAATC CAAAAGATG GTGGTCCAGT CGGATATGCC  
52201 TGGGCTGCTC TGACCAGCTC AGCACACACA AGGAATAGCT CTGGTCTGG  
52251 GCAATTTGTG CCCTGGGTCG GAGGGTGAGA GTTTATTTTA TCGGAACAAT  
52301 AAAGGCATCC CACCTGCTAC CAGGAGCAAC CAAAAATGCT CAGAAGTTCT  
52351 GGAACAGGAG TGCTGTTGAA CAGGGTTTCC TGGCAGCCCG AGATAGAAAG  
52401 TGGTAAAAAC AGCAAAATGC TGCTATGGTA TAGTACTGAA GTCATCAGGC  
52451 ACACACTGAG ACTTCCTGTG GGTCAGGCCT TGTGAATGGT GCTGGAGACA  
52501 GAGACTGGGA TAAGATCTAC CATCTCTGAT GCTGACGCCC AGCCCAGTTC  
52551 TCCCCTTTTC CTCTCTAGTT TTTTCTTTCT CTGTCTATGCA TCCCCCTCCC  
52601 TTTGCTGTCC CTTAAATGTT GCTCCCTTGA GCATCATCTT TTACTCTCTT  
52651 CTCATTTTAC ATCTCCCTCT GGACCACTTC ATCCAGTCTT GTGGCTTCAG  
52701 TACCACCTAC ATACTCATCA CTCTTAAATC TAGGGATTCA GCTAGATTAT  
52751 TCCCCTGAGT TCTGGTCCCT TATGCCTCAT GTTAACTGGA TAGCTCCACC  
52801 TGGATGGGCT ACAGGAGCTG CACACCTAAC TCTCCTGCAT TTTCTGTCTT  
52851 GCAGAGCATG ATACTGTTAT AAGCTTATAA GAGTCATCCC AGACGCCTCC  
52901 TTTCTTCTT TGCAATCCATC ACTAGGACCC GCACATTTTA CTTCCTTAAC  
52951 ACGCCTTGTC TCTGACTCCT CCTCTGCTGC TGCCTGAGTT GAGGCCTCAT  
53001 AATACATTCC AGTAACTCC TACCCACACC CCCCACAGAC GATCTCTCAC  
53051 TTGCTGCATG TCTCTTACGC ACTGCTGCCA GAGTCAGCTT GCTAAACCCA  
53101 GGTCTGACCC CCTGGCTCTT CTCCCTGTGT TAGCCTTGAT GGCTTCCCAC  
53151 GCTCATTAAT AAGACCAACA AGAGCCACAC TCTCTCCTCT GCTTGTCTTT  
53201 GCAGCTTTAT TTTGGTGTAG CCATCTTCAC ACCCTCTAGT CCTGACACGC  
53251 AGACCTGAGG TAATTTCCCA AATGCCCCAG GCTGATTAT GGCTGAGTGT  
53301 CTTTGTATCT GTTGCCCCC CATTTGTGTT CCGCCTTCCT CTCCACCTCC  
53351 TTCTGTCCCT TCGCAGACAC CTAATGCCCT TTCCACACCA GTGGGCACCT  
53401 TGTCTTTGCA TTCTCGTCTC CTCTTCGGTG GCACTGACAC TCTCTCTTCA  
53451 TGTCTTTCTG TCCCCACAC CTCTGTCAAA CACAGCATCT GCACGCTTTG  
53501 TTGCATTGTC TTGCATAGAA CACGTAGTTT TCTTCACCTC CTAATAATGT  
53551 GGACAGCTCA CGTTGATTGA GGACTTGCTT TGAACAAGGC ATTGAGCAAC  
53601 ATGCCGTACA TTTTATGTTA AATCTTCCCA ATAGTGCTAC TGCTTCTGTC  
53651 CCTTTCCAGG GAGGAGGAAG GAGGCTTGGG GAAGGGACTG TCTTTAGGA  
53701 GCCCTGCCCA GTGTTTCTG TGGAGGGTGG GGCCATCGTG GAAGACAGAC  
53751 CTATGGTAGG GGTAAGCTGG GTGGCTGTTG AAGTCCAACC TTCCCCCTTC  
53801 TTCTCTAAC CCTGATAACC TTGTTCTCTG GGGCCTGTCT GCTAGTGGAG  
53851 AGGCTTCTGA CTTTTTTTTT TTTTTTGCCA TACCTTGGT TTATAAATAC  
53901 AAGAAGAGAT TTGGGGGAAA ATCAGGGGAA ACTGTGAGC TTACAAGTCC  
53951 CGAGAAGGAA GTCAGTCTC CTTTAAAGTCT CATGTGAACC CTTGTCTCTC

FIGURE 3R

01 PE  
MAY 02 2003  
PATENT & TRADEMARK

Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

54001 TCCCCAGCTT GTGGGGTGAA AGAAAAGCCC TTTAGTCTTT TGGGTCCTCA  
54051 AATCACAGTT TATGCAGTTT GGCCCCAGTC AGAGGGACCC CAGGAAGGCA  
54101 GACTCAGGGT AAATTCTGCC TGTCTTCCAC CAGAGAGGGG ACTCACCAAG  
54151 TGTGACTCAT GCCATTCAAT AGAATTTTAA AAATCTCACA AGTATTTTGT  
54201 ACCCCTGAGT AAAAGAGAGG CTTGTAGCTC TTCATGAAGG AACAGAAAG  
54251 GCCCCAACTG AGTGTTTGGA GCCCAGTGAA GTAAATACT GCCCTGTCTC  
54301 TTGTCTGTCC ACTCTAGCGC TTGTACAAAC CATGAAGAAC TCTCTTTGGA  
54351 CTGTTTGCTT TTTGAGAATG TTAACACCTT GACTCTGGAT TTCTGCCTAT  
54401 GGGAAAAAAC CACAATAGTG CCAGGGGTGC TTCCATATGC AGGATTAACT  
54451 CTGCAGTCAA AGTTTCTGTT GGGCAGGTGT GTGAACTTGA TATCATAAAT  
54501 GCTGGCCCAA AGCAAAATGGG AGAATGGATG AATGAACAAA TTCAGGAATG  
54551 AAACAACTG TAACCAGGGG TCTCCTAGTT GTAGGTTCTC TGCTAAACTT  
54601 CATATTGAGA CACAAAGGAA GGGCATCTTA TAATATAATG TTGGGGGATG  
54651 AGCAGTCAGC TTGGAGGTGG GGACACGTAA GGTGGGTTTT GATGTTTGAG  
54701 AAGGAATGGA CCAAAAAAAG AGTCAAGAGG TGAGAAGAAT CTGGGAAGTG  
54751 AGACCTGTTT CTCTGGGACA GGTGTGAGCG GGTCTGGGTG CTGCTGGGTT  
54801 TGGCTGGGGC AAAGGTTGCT TGTGGGGCG TGGCAGTGGG TGAGGCCTGT  
54851 GAGATAGGCA GGCGCCAGGT CCTGGAAGGG AGAGTCAGGG AGCAAGGCAT  
54901 GGAGCCTGCA CTTTACTCTG AATGTTGGTG GCGCCTTCAG AGCATTGTTA  
54951 GCAGGGGTCC ATGTGATCAC ACTGACACCT GAGAGAGTGA CACACCATGT  
55001 ACATGGCTGG TATATGGAGG ATGGATTAA GGGGGACAGG ACTGAAGGCT  
55051 GTCGCAGTGA TTCAGGTGAG AGAAGATGGG GTTCTGGACT AAGGGGACAG  
55101 GAAAGCACAG ATGTGAGATG AGGTGGCAGG CAGTTCTAGC TCCCTCTTCC  
55151 CCCCAGTCTG CTTGTTTTTC CTCTTCTCAT GGCTCCATAG GGTCTCAGTC  
55201 ATTTTCATCAT AGCTTGATCT CTTCCATCTG GAAGTCAGC CTGAAATTTT  
55251 GAAGACAGCA GGGAGCAATG CTTACCCAA AGGGAGAGCC TCGGGTGGCG  
55301 TTTTGGGACC ATGGCTTGCT CTCTTAGTGC ATACAGACTT AGTGTTACTG  
55351 CCATTCTTAC TGGGATCAGC TTGATTGCCT TTAAGGTAGG GCTGTCCATG  
55401 GAAACAGGGA AAACATGATT TGGTTGTTTG GGTATCTGGA ACCAGAGGCA  
55451 GCACAGATAC TGCTCTAAGA GCTGCTGGGA CAACTGGAGG CCGGTGTGGG  
55501 TGGAGACCCC GAGGTGGAAT CCTGCGCTCC TCATCTTCC TGCCCTCTTC  
55551 CTAACACCTT CCCTCCCCAG CGGCCGTAAG TCTGCCTATG CCTATGCAGG  
55601 CTGAGCTGTA ACCTGGGACT CTTTGGGAAG TCTGAGCCAT CAGTGCAGGT  
55651 GGCCCCGGA TGATTCCAGA CCTAGAGTAG GGGTGGGAGG TCGGCTGCGG  
55701 GGCGGGGGGA GGTGAGAGGA GGCTGTCCTT TCCCTCTTGC CCGGGAGTCT  
55751 GCAGTCACAG TTGCACTTTG CCTGGGTCAG TAGCAGAGTC ACGCTGCTGT  
55801 GTGACAGTGG CACTGAGGCA GCTGCATTTT AGGTTTCCAA GAGACTCTGA  
55851 ACCCTTGGA TGCCATTGTG TTCAGGTGAC ATGGAGGAAT GGAGGCACTC  
55901 GGGTTAAGTG TCTGAAGATG GATTCAAGGA TGCCCCTGCT TGTTAGCTTG  
55951 TCATAGGTTG CTCAGTGTC CCTCTCTGGC CCGTAGTTTC CTCATCTATC  
56001 AATGGGGGCA GATAATAATC ATCACCTTAC ACAGAAGGTT TGGCGAAGAT  
56051 AAAACAGGT TCACTGGCTG GGTGCAGTGG CTCATACTTG TAATCCAGC  
56101 ACTTTAGGAG GTCGATGCTG GCAGGTCGCT TGAGGACAGG AGTTTGAGAC  
56151 CAGCCTGGAC AATGTAGTGA GACCCCATCG CTACAAAATA TTAAAAAATT  
56201 AGTTGGGCAT GGTGGCATAT ATCTGTGGTC CTAGCTACTG GGGAGGCTGG  
56251 GGTGGGAGGA TAGCTCAAGC CAGGAATTCG AGGTTACAGT GAGCTATAAT  
56301 TGTGCCACTG CACTTCAGCC TGAGTGACAG AGCAAGATCC TGTCTCAACC  
56351 AAAACAAAGC AAAACAAAAA CAGCTTCATG CACGTGTAAG ATCTTTGTTA  
56401 ATTCTTCCAT TAACCTGAA GGCGGGATGC GTCTTATTAA TTTATGTAGC  
56451 TCCAGTGCCA AATGCAGTGC CAGGCAAACCT CAGTTGTTTG TTGATTGAAC  
56501 GAATGAATGG ATGGTGAGT AATATCTGTG GGGCTTGAGA AAGCCTGAAT  
56551 AATGTCAACT TATTAAGAGC TTGTTCAACC ATGAAAAAGC AGATTTCCAC  
56601 ATGTACCCCT CCATATCACC CACATTTAGG TGAAAAAGAA ATATGTGCCG  
56651 TATTTCTTTT TTTGAGACAG AATTTATCTC TTGTCACCCA GGCTGGAGTG  
56701 CAATGGCAGC ATCTCGGCTT CACTGCAACC TCCACCTACC TGGTTCAAGT  
56751 GATTCTTCTG CCTCAGCCTC CCGAGTAGCT GGGACTACAG GTGCATGCCA  
56801 CCATGCCCCG CTAATTTTTG TATTTTTAGT AGAGCTGGGG CTTACCATG  
56851 TTGGCCAGGT TGGTCTCGAA CTCCCAGCCT CCCAAGTGCT GGGATTACAG  
56901 GTGTGAGCCA CTGCGCCCAG CCATGCAGAT ATTCTTGAGG AAACATTTTA  
56951 AAATGAAAAC TAGCAGAAAG GATATTACCT TTCAACATTT CCTTTCTCAT

FIGURE 3S



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

57001 CAATTCTTGG CAGCACTTTT GCTGCCCAGT ACTCTTCTGT TGGAGCTGTG  
57051 AAGTGTGATA GGCCATTACT TTATAGATCC ATTCATTATT GATACGTTTT  
57101 GTAGGGAAGA ACTCCACTGC TGTTTGGAAA CTGAAGTAGT CAATCTCATA  
57151 GACTGGAAAA TATTTTAAAT GCCTATTTGA AACAAATGTC GTTCCTATTT  
57201 TTTGGGATAA AAGGGCCCTT TCCCCCTGGA ATTGCTATGT TTCCTCTTTT  
57251 CCTGTTTCCTA CACTCTGCAG AACTGACTTT GAAGTCAGAT GATTCCCTTT  
57301 TTAATCTGGC TTCTCGCTTT TGGGCCGCTT AACCTTGACT TAGCCATTGA  
57351 ACCTGTCTGG GTCTCAGTTT CTTTGTCTGT GAAGTGGGGC TGTGTTGGGC  
57401 ATGAGCATGC GCCTACAGGC CTCTAACTGG AGGGGGTGT TGGTATCAGG  
57451 GCCCTGGCTG CTGCCCTGAT CTCCACAGCT GGGCTTGCAC TGCGGGTACG  
57501 TTGCTCCCGG GCTGCTCCCA GCCAGTGTCT GTGCGCAGCA AGGATACCAC  
57551 GGCAGGATTG TTTCTGGGAG ACACAGGACT CCTCAGACAG CTAACCTCAG  
57601 CTCAAGAACT CTTTGATGGG CTTGCTAAAC TTCCTTAGGC TGGAAGATGC  
57651 TTACCTCCTC CTTCTTCTTT TCCTTCCTTT TCCAGGGGTC AGACTTACTT  
57701 AGAGTCTAGT GCCTGTTCTA GCCTCCCAA CTCCCTATCA TTTTCTCTCA  
57751 CACATGCGTT CCCCCTAATA AAATCCATGC ACATTTAATC CTTCTTGGC  
57801 ATCTGCTTCT GGGGGTCCCTA CCTGGACTCA TGCAGTGTGA TAATTCCTTG  
57851 TAGTGAGGAC CGAATGTAGT GATGTAAGCA GAGTGTGTTGT CAGAGTGACA  
57901 GCATGAGTAA GTGCCAGTA GGCCATCAGG GCTCCTGTCA CCTTCACCAC  
57951 CATCAGCACC ACCATCCTCA TCACCATCTG GCCAAGTTTG CTTCTTTGTT  
58001 GGTTCAGGC ACGAGAACTC CAGTGGTTGA TTCCAGGTCA TGAGGCAACT  
58051 GTATTAGGGT GAGAACAAC GTGGCTTCTA AGGAGAATAA ATGGATTAAAT  
58101 GAAAATGCCA TTTAAAAATT TATCCAACCT GGCTGGATGC GGTGGCTTAC  
58151 GTCTGTAATC CCAGCACTTT GGGAGGCTGA GGGGGGCAGA TCACCTGAGG  
58201 TCAGGAGCTC AAGATCAGCC TGGCCAGCAT GGTGAAACCC CGTCTCTACT  
58251 AAAAATACAA AAAATCAGCC GGGCATGGTG GTGCACGCCT GTAGTCCCAG  
58301 CTACTTGGGA GGCTGAGGCA GGAGAGTAGC TTGAACCCGG GAGGTGGAGG  
58351 TTGCAGTAGC CCGAGATTGT GCCACTGCAC TCCAGCCTGG GCGAGAGAGC  
58401 AAGACTCCGT CTCAAAAAAA AAAAAAGAAA AAGAAAAAGA AAAGAATTTA  
58451 TCCAACCTAA GCACAATCCA GATCCTTTTC TAGCCATTGA GATGTGCAGT  
58501 CTTCTTTGCC AAAACAACCA AGTCCCTTTT TAGTGAAATG CACAAAAGGT  
58551 TTTGTAACAT TCTGAGATCT GTGCCGGTAC TCCTGACAAC TACAAATATA  
58601 CTCCAGCCAG TAGACCAGGG CTGCTCATTT GCTGTTCTCTG AGAACCCTGT  
58651 GGACGTTTAG AAAAAAGAT GGCTGCTATT ATTCACATTT CACAGTAAGC  
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58801 GGGTGGATTC TGTTCAAACCT CTGCCCTAAT GGACAGTCTC TTCGCAAACCT  
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58901 GCCTCAGGGA TGCTAGAAGC TTGGGAAGCA TCCATGATGC AGGTCACTGA  
58951 CGGAGTCCAG CCTCCACTCA CCTCCATGCT CATGCTATTT ATTGCATGTC  
59001 AGCTGATGAG GCTTTAAGCT AATGTTGGTT ACCTGGTGCT GTGGAACATG  
59051 TTCCTTAAGC TGACTGGCAA GCCCCTGAGG CTGGGAGGGA CTGTGCCTTA  
59101 TCCCCACCAT ACCACACCCC TTTGTGCCCA TTCAGCATTA AATAAATGTT  
59151 TGTTTTTGTAG AGTGCTGGTG ATTCCGATGG GGCTTTTGTG TGAAGGAATT  
59201 ATCACCACCA CCACCACCAC CACTGGAAAA CAACATTGTC TCTATGCCAG  
59251 GCACTATGCC AAGAAATTGA GATCCAATGA TTAAAAGATG AACTTTCTGA  
59301 CTCCAAGAAG TTGATAGGCT AGTGGGGAAG ATCAGCACGC TGGCCTGCC  
59351 TGGAAGAGCC CAGGACGACT TCATAGAGGA GGTAGCTTTT GGCTGAGACT  
59401 AAAGAGGATG GGAGTTTTC AGGCAGATGA GGGTGGGGAA GGGGTTACTG  
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59551 ATTTGACGCT GCTCATCCAC GTTGTCTGTG TGGTTTGGAT GTGCCAGCAT  
59601 TCCTTCCACC CTTTATTCAC TTATTCCACC ATCATTGATT GTCTACCCAC  
59651 CATGTGCCAG GTACTGTGCA GAACACTAGG GGTGCAGAGG TGAGGGGTAG  
59701 ACAGGTGCC TGCCCTCATG GAGCTTTCAA TCTAATGGGA GTGCTGGACA  
59751 AGGGCACAGG CTGTATCAGC AGCACAGCAC AGTGAGTGCT GGGCAAGGGA  
59801 GATGTATTAG TCTGTTTTCC TGCTGCTAAT AAAGACATAC CCAAGACTGG  
59851 GTAAGTTATA AAGGAAAGAA GTTTAATGGA CTCACAGTTC CATATGGCTA  
59901 GGGAGGCCTC ACAATCATGG TGGAGGGTAA ATGAGGAGCA AAGTCACATC  
59951 TTACATGGCA GCAGGCAAGA GAGCATGTGC AAGGGAACCC ACCTTTATAA

FIGURE 3T



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60001 AACCATCAGA TCTTGTGAGA CTTATTCACT ATCACGAGAA CAGCACGGGG  
60051 AAAAACCTGC CCCCATGCTT CAATTACCTC CCACGGGGTC ACTCCCCCAA  
60101 GATGTAAGGA TTATGGGAAT ACAATTTAAG GTGAGATTG GGTGGGGACA  
60151 CAGCCAAACC ATATCAGGAA ATCTGAACTA ATGGAGGGCA GATTCAATTC  
60201 CTGGGGCTTC CGTAGCAAAT TGCCACACAT GTAGTGCTT AAAGCAGCAC  
60251 TAATTTATTA TTGTATGGTT CTGGAAGTCA GAAGTTCAAA ATCAGCCTCA  
60301 CTTGGCCAAA ATCAAAGAGT AAGCAGTACA GGTTCCTTCG GGAGGCTCTA  
60351 GGGGAGGATC CTTCCCTTGC CTTTTCCAGC TTCTAGAGGG ACCACATTCC  
60401 TGGGCTCATG GCTGCATCAC TCCAACCTGT GTATCTGTCC TCACATCCCT  
60451 TCTCTCTCTG GCCCTCCTGC TTCCTTCTTA TAAGAACTCT TGTCAATTATA  
60501 TTGAGCCCAA CCATATAATC CAAGATCATC CCCCATCTCA ACATTCTTAA  
60551 TCACATCTGC AAAGTCCCTT TTGCCATGTA AGATAACATT CATATATGTC  
60601 TTGGGGATTA GGATGTGGAC CTCTTTGTGG GCCATTATTC TACCTGCCCC  
60651 CAAGGCAGGA GGGGAGAAGG TGCTCCAGA AGTGATATTT AATATGAGAT  
60701 TTCTGGGTCA GAAGCAGGAT ACACATGGAA GCAGGGAGGC CCCTTGGGAG  
60751 GCTGCTGGGC TGGTCCAGGC AAGATGTGAC AGTGGCCTGG ATGAGGCTGC  
60801 TGGCCACAGG GGTAGGAAA GGCCCAAGGG ATGAAATACA GTGATGAGGC  
60851 AGAATGAATG GGAGATGTGG GCAGTGGTAA AAGAAAGCCA CCTTAGGCAA  
60901 GGCTCACCTT CTCGGCATCA ACAGGAGCAA GGGGAAAAGT GAATGCAGCG  
60951 TCTTTAGGGA AAGGTTAGCA AGAACATAAT GCCCAGGTTG CTGATTCTAA  
61001 CATATAGATC TTTCAATCAA GATTCCAGAC AATTTTGCCT TTGTGTAAT  
61051 CTGAGGGAAA TTTAACATGG AGTGATTTTA TTGGATTGGA TAATATGCCA  
61101 TAAAAGACTG ACGTTCAGCT CGGTTTCCAA AGACAGAAAC TGATTCCGAG  
61151 GGCCTAGGAG GAGAGGCAGA TGTTTACAAA CTTAGATTCT TCTAAGCCAT  
61201 CACCTCTACA GCCAGGTGTT TTGAACAGGC AGTGACATAG CCTGCTCTTT  
61251 GACTTTTCCA ACAGTGATTG AGCAGTTTAA CTCCCTGCTG GAGTGGGACT  
61301 GTTTACCCCA CTTAGGGTAA TTAGGTTTAT CATCTACTAA TACCTTCTTC  
61351 ACACAACAGC CAGCCTGCAC CATGACAGAG ACTATAATAA GAGTTGGAAT  
61401 AATAAAGGGA GAACAAAACCT GAAGTGCACT GGCTGTTCTG TGTGACACAA  
61451 GACATTTCTG TGATGCATGA TAGCATTGCG TGTGCGTCAT AACCCCAAAC  
61501 TTCCTGCCAT CGCAGAAAAG CCTCCAGCTG AACCTATTTA TTTCCAAAGT  
61551 AATGAAATTG CCCTACAGAG AACAGGGACC TTAGAGAATT CTATGTGCTT  
61601 CGAAAACCA GAAACAGTTT TTTTCCAATG ACGTCTTATT GGAAAACAAT  
61651 AGAAGAAAAA TTCTATTACT AGTAGATCAG GAGTGGTTAT GCCTAAGTCA  
61701 CATCTTCTAT TAAGATATAA CAAGCTCATC CTTTTTCTCT TTGTTTGTG  
61751 ACAAGAGGAC TTTTAAAGTC TCTAGACATT CATCTCTTCT CTGCTGTTGG  
61801 TATCACCAGC CTTGGTGCTT TGGATAGAGT AGTTGGTTAT CCCTCTCCTA  
61851 TTTACTTCTT CTCCAAGTTC AACAACATGT TTGTTTAA ATCTGATGAT  
61901 TTGTTGTATT CTTTACACAT TGTTTCAACA AGGAAGCTAA GGGAGGAGGT  
61951 GAATTATAAA TGGCAGAGAG ATAGCTTTCA ATTTGGACCC TCGTAGAAAA  
62001 ATGTAAGTAT TTCAAACCTCA GTTTATACTT TTTTTTTTTT TAACTGGGA  
62051 CCCCTGTGTC TTATTTTFTA GAACTCAAAT GGGTACCTAG CAACTGATCA  
62101 AATTCCCTAA CTGCAGGCTT GGTGAACCAG CGTTTCATCC TCACATTTGA  
62151 AAGCTGGCTC AAAGAAGACA TCTGTGCTTT GTTTCTGACA CGTTTGTAT  
62201 TTATTTATAA ACAAACTCTC TTCTTCTTTG TCCCCACCC TGACTCCTCA  
62251 GTGGCCGTTT CCGCAGCAGC ACCGGTGTGC CAGCCCAAGA GCGCCACTAA  
62301 CGGGCAACCC CCGGCTCCGG CTCCGACTCC AACTCCGCGC CTGTCCATTT  
62351 CCTCCCGAGC CACAGTGGTA GCCAGGATGG AAGGCACCTC CCAAGGGGGC  
62401 TTGCAGACCG TCATGAAGTG GAAGACGGTG GTTGCCATCT TTGTGGTTGT  
62451 GGTGGTCTAC CTTGTCACTG GCGGTCTTGT CTTCCGGGCA TTGGAGCAGC  
62501 CCTTTGAGAG CAGCCAGAAG AATACCATCG CCTTGAGAGG GCGGAATTC  
62551 CTGCGGGATC ATGTCTGTGT GAGCCCCCAG GAGCTGGAGA CGTTGATCCA  
62601 GGTGAGCAGG GAGTGAGTCC ATCTTAGGCC AGCTGGTGGG GTGGATGGCA  
62651 GTGTTGGTTT TATCTTCTG GGTCTCTAGT CTTGCCTTCA GTTGAGAGGC  
62701 TCTTGGTGGT CAGGGAAGTT CTCTCCAGGG AGGTGACATG TGAGCTGAGA  
62751 CCTCCAAGAA GCGATAGTGA GGCATGTGAC AGTGTGGGGG AAGGAGGGTC  
62801 CATGTTCTGC ATCTGGTTTT GGATGAGTGG TCAGAGGCGG CAGCAGGCCA  
62851 ATGGACTTTG GATTTTCAAG TTCAAGTCCA CCTATGTGTG CTGATTAACT  
62901 CCTTGATTCT GAACTCTGTG GAATGCTGGG ATAGAACCCG AAGAAGGAAA  
62951 GAATTTTAAA TATGCAGATT TAGAATAAGC AGGGATATAT TAACCTGTCC

FIGURE 3U



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

63001 AAGGTCCATG AGGATGAGGT AGAGAAGAGG CCACCAGGTA TGTGGGTGAA  
63051 GAGGCTGTCA GTGGCCTGAG ACAGCTGTTA TAGTGGATTT ATGGGGATGA  
63101 AATAATATGG ATCACAGTAG TAGTAATCAT CAGGTTTGCT GTTTTTGAAT  
63151 ACTTACTGTG TATCAGGCAC TGTACTAAGG CCTTTACATA CCCTGGATAT  
63201 TAAGGAAAAA AGATTCTTAG GAAAATGGAA GCAGAGAACT TGAACATGCAG  
63251 CCTAAAGAAG CAAGGCAACA CTTCTGGGCG ACAGATGTGG ACTTGGCAGG  
63301 GGTGGACTGT GGCGGTAAAG AGCTATAGGA AAGCCAGAGA GTCATCTGTG  
63351 GGGATGCCGT GCGAGGGACT GGATCAGGAG GGTGTGAAG TCTGGGAAGC  
63401 CAGAGAGAAA AGCAGTTCCT ACGAGGAAGA AAGGGAAATG GTGGAGAGCC  
63451 CTGTTGGAGG GCTTCACCTT GGACGTGAAG GAGGAAGGCT GCCTCTGAGG  
63501 CTGAAGTTCC ACTTTCTATC CCAGACACCC TCCTGAACTA CAAAGAGTGG  
63551 GTTTTGGTGG AAGGCGGTGA CATTATATGA GGTGAGGGAG AGTCTCATCT  
63601 TTCTGGGGGC TCTAAAGTTT GGAAGTGGA GGGATGGAAA AGACAGCTTT  
63651 TACAATTCCT TCTGGCTCTG GAAGATGCAC ATTAAATCT AATGGCTGCA  
63701 ACAATCCAAG ATAGTGTAGG ATTTACCAGT CTGCGCTGTT TTCTTATTTA  
63751 TTTATTTCTT ACCATACCAA TAGAGTAGGG GAATTCTGAT GCTGCTTATG  
63801 ATCTGGCACC TTCATAGCAA TCATATTCTT GTCAGTTAGT TTTAATAATG  
63851 ACTTGACTCT TAAATAAATA GAAATACAAA TTCTTCCCTT CCTGGGAGTA  
63901 AATATGATTT CATAGCTATG CCCTATAATT CTTCTCAAAA AAATAAAATG  
63951 TTAAAAATCC AAGGGCAGCA TTTCATATAA GTGTTTCATA GGAAGTCAGT  
64001 TCTCCAAATG GCTTTGTCTT TTTTTTTTTT CTTTTTCTTT TTTGAGACAG  
64051 GGTCTCATTC TGTCACCTAG GCTGGAGTGC AGTGGGTGTA TCATGGCTCA  
64101 TTGCAGGTTC AACTTCCTGA TCGAGGTATC AGCTGATCCT TCTGCCTCAG  
64151 TCTCCTGAGT AGCTGGGACT ACAGGCATGT GCCACCATGC CTGGCTACTT  
64201 TTTGCATTTT TTTGTAGAGA CAGGTTTTCA CCATGTTGCC CAGGCTGGTC  
64251 TTGAATTCCT AGGCTCAAGC AATCAACCCG CTTGGCCTC CTAAAGTGCT  
64301 GGGATTACAG GTGTGAGTCA CCACGCCCAT CCCTTTTCTT CTTTCATGGG  
64351 AAAATGCTAC CACATTGTG GTGATGAGAT TTTTGTACTA ATCAGTGCCA  
64401 GATTTAAAGC CTAGCATGCT ATAGAGAATG GAATAAACAA TTCTGGAGTA  
64451 GTTTTAAGTA GGAGTATAAT TACATTTATA CACATTGTTG TGATATGAGG  
64501 TAGGATCCTT TTTAATTAGT TGTAAGACAC GTCATAATAA CCTGATAGGC  
64551 GTTCTGAAGT GAATCTAGTA TTGTGTTTGA ATTTTCCTTC ATTAGGCAGT  
64601 AAGATCTTGA AGAAAAGGAA TGCACGTGTG TACCTTTTCC TCCACATGTG  
64651 ACCTATGCTT TGCTTTGCCT CTAATTATG CCCATTAGAT AAATGTTTTT  
64701 AGAGCAAGAT ATCAAAGCAA ATTGTAGAAC ACTGGTGATG TCACAAGCTA  
64751 TCTGAGCTTA TCCATGCATT TGTTGATTAA TTCGGCATT CCGTATTGCC  
64801 CATTCTTTAA CCCTCATCTT TATGAGAGAG CTCAGAGACC TGAATGAAGG  
64851 ACAGGGTCAG AGAGCGTGGA GGTCCCTTAT CTGATGCTGC CATTAGACT  
64901 GGTGTCCTGT TTTGACCTCA AAGATTTCTC TGTGAAATGA GATATGTGTG  
64951 TGTATGTGTG CGTTTGTGTG AATGTGTTTG CACATACACA CGTGTGTGCA  
65001 TTTAAGATAA TTTTATAACA ATTTAAAAAG CTGCTCTTTA TTAGGCATCT  
65051 GTTATGAGCT GGGCATCATA TACCCATTAT CTCATTTAAT CTTATCAACA  
65101 ACACCTAAG TTCATATCAC GATTCCCATT TTACAGGGGA GGAAACATCA  
65151 GTTTCCTTAA AGAGGTGAGT AACTTTCCAA CCACCAAAGT GGTAGAGCTG  
65201 GTAGTCAGCG CAAGGTTGGA CTGACTGTAC ACTCTCTCAT CCAAATAGTC  
65251 TACAGGCCCT TTAAGTAGAT CTTGGTTTAT AATAAGCTCC AGTCTCTTTT  
65301 AAACCTGTGC TTTATGTTGA ATGCTGTATT AGTCCATTCT CACTATAAAG  
65351 AACTATCTGA GACTAAGCAA TTTATAAAGA AAAGAGGTTT AATTGATTCA  
65401 CAGTTCCGCA GGCTGTGCAG GAAGCATGGC TTGGGAGGCT TCAGGAAACT  
65451 TACAATCATG GCAGAAGACG AAGGGGAGGC AGGCATGTCC TATATGGCTG  
65501 GAGCAGGAGG AAGAGAGAGC AAAGGGAGGG ATGCTACACA CTTTTAAACA  
65551 ACCATATCTT GGCCTGGCGC GGTGGCTTAC ACCTGTAATC CCAGCACTTT  
65601 GGGAGGCCAA GGTGGGTGGA TGACCTGAGA TCAGGAGTTC GAGACCAACC  
65651 TGGCCAACAT GGTGAAACCC CATCTCTACC TAAAATACAA AAATTAGCCA  
65701 GGCGTGGTGG TGTGCACCTG TGGTCCAGC TACTAGGGAG GCTGAGGCAG  
65751 AAGAATTGCT TGAACCTGGG AGGCAGAGGT TGCAGTGAGC CGAGATCATG  
65801 CCACTGCACT CCAGCCTAGG CATCAGAGCA TGACTCTCTC AAAACAAAAA  
65851 CAAAAACAAA AAGCCAAACA AACAGATTTC ATGAGAACTC ACTCACTATC  
65901 ACAAGAACAG CAAGAGGGAA ATCTGCCCCC ACCATACCCC TTCTCCTACA  
65951 CTGGGGATTA CAATTCAACA TGAGATTGTTG GCAGGGACAT AAATCCAAAC

FIGURE 3V

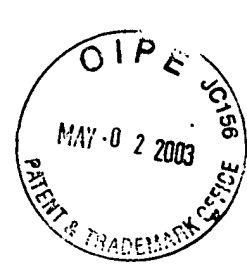




Docket No.: CL000858  
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Title: ISOLATED HUMAN TRANSPORTER...

66001 CATATCAGAC ACTTTCCAGA ATTTTAGCAG TCAAAAAGCA TTAGATGGCC  
66051 AGGTGTGGTG GTTCATGCTG GTAATCCCAG CAGCTTGGGG GGCCAAGGCG  
66101 GATGGATTGC TTGAGCCCAG CAGTTCGAGA CCAGTCTGGA CAACATGGCA  
66151 AAACCCCTTT GTACAAAAAG TTACAAAAAT TAGATGGGTG TGGTGGCACA  
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66251 CCCGGGAAGT CAAGGCTGCA GTGAGCCATG ATTGTGCCAC AGTACTCCAG  
66301 CCTGGGAAAC AGAGTGAGAC CTTGTCTCAG TAAGTAAATC ATTAGAGTTC  
66351 CTGGCTGCC TACAGGAAGC ATTTCTGTTT CTTCTCCCTA TGCACATTGA  
66401 GCATCAGTCC TGGACCTGGG ATGCTTTTAG ATCTCCATCT ACTATGACTT  
66451 ACAGATTTCAT CTTGTGTTT ATCTACAGTC TTTCTCACAA TATAAGTTAA  
66501 GCAGGTTTAA CTGCTGAATC TGTGTCAAAT CATTGCACCA AATCATTACA  
66551 TTTTGGCCCT CAGTTCACCTG ATACCTTCAC AAGGATGAAA GTGTCCACTC  
66601 TTACAGACCA GGGAGCTTTC TCACACTTTA TGCCTCTGAG CAGCACTGTA  
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66701 TGGGAAGGTT TTCAGTGTC TGTGTTTAA GTTGGAAAGA TAGTACTATT  
66751 GTATCTCACC CAAGTCTGAA AGGAGTGACT GGAGAGTAGA AAGTAGATGG  
66801 AAAGTATTTA TTTTCATCATG TCTCTTGGCT GGATTGAGTG AACCCCTCAT  
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66951 TTAGCTCTTA CAGCCATCGT GGGGAGGGAT TTTCCAACAA GTAAGACCAC  
67001 TTCATGGGGT ACTGTGGGAC TCCAGAGGAG AGTAATGGGC CACTATCCCT  
67051 AAAGGTGAAG AAAGATGGGT TGCTGTTATG AAGGGGACAT TCTCATCCAT  
67101 TCATTTAGTC ATTCATTTCAT CTATCCATCC ATCCACTTGT TCTCAGAATT  
67151 GCTGCTGAAC TCCTGCATGT ATCAGGTAAC ATGCCAGGTG TTGGGGAGAG  
67201 AAAGAAGAAG ACACGGCCGG GTTCGGTGGC TCACGCCTGT AATCCCACCA  
67251 CTGTGGGAGG CCGAGTCAAG CGGATCACGA TGTCAGGAGT TTGAGACCAG  
67301 CCTGACCAAC ATGGTGAAC CCTGTCTCTA CTAAAAATAC AAAAATTAGC  
67351 TGGGCGTGGT GGCAGGTGCC TGTAATCCCA GCCACTCAGG AGGCTGAGGC  
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67451 TGCCATTGCA CTCCAGCCTG GGCAAGAGAA TGAGACTCCG TCTCGAAAAA  
67501 AAAAAAAAAA AAGACTCACC ATAAGCAAGT TACTCACCTC TTGTTTCTTC  
67551 ATCAATAGAA TGTGGCCTCA GGGTGTCTGAG AGGATTAAAT GCAGTAATTC  
67601 ATGAGAAAGG CTTTGAACCTG TGCTTGGCAC ACGGTAAATG CTCACAAAAG  
67651 GATTATTATT GCTGCTTCTA TTGCTGCTAC TGTTCTTTAT ATTATTGAGG  
67701 GAGCTCAGAT TTTCAAGCAG TGTTCTTAA TGGGATGGGG TGGGGTCACC  
67751 GGGGAGGGGA TGGTTGCCTC TAGGGGGCAT TTGGCAATGT CCGGAGACAT  
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67851 CCAGGGTTGC TGCTAGACAT CCTACAATGC ACAGCATAGA CCCCCCTCC  
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68151 AATGATGGCT TAAGTTCACC TGGTTAGAAA TGGAGGATCC AGGGTTTACT  
68201 GCCAGGCAGT CTGACCACAT ATCCCAGGCT CTGAACCACC ATGCACTGGA  
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68351 TGGTGACAAG AATGTTATAC TAATCAGTTC CAGATTGAG GCATTGAAAG  
68401 TGATCAGAAT GGCTTGAAC GAGAAGTATG AGAGTACGTG GAAATGAGAC  
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68501 ATGTTGTGGA ATGTCGAGTC ACTGAAAGCT TTAAGCGAGG CTTGGAAGAT  
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68651 AGGTGAGGGA TGCTGAGAGA TAGAGAAAAG GCTATATTTA AGAAAGTTGA  
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68751 ATGTGCTGCA TATCCCTGCA TGGCCTGTAG CCCCCAAGAC TCGGGGGTTA  
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68851 AAATATCATG TTGCCCCGGC CTCCTGTCTC TTCTGTGAAA TGGAGATTGC  
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68951 AAGAAGCTCA GTAACTTTGA GCTCTTGTTA TTGCTGCTGC TTATTTGTTA

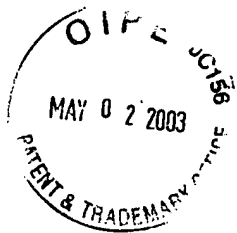
FIGURE 3W



Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

69001 GGAAGGAAG AAAAAAGAA ACCAGAAAAC TCCTAACTGA TGCGCATCGT  
69051 GGAGTTCTGC TGAGGGAAAA GAGAAGAAGG TGTCTGAAAT GACTCTTGGG  
69101 CTTCAAATC TGGATTTTCT CATAGAAAAA TTTTATTTCT ACTGTTCAAG  
69151 TGCAGAGTGC CCATCACAGA AGTCGCTCCC AGAGTGCTAG GCTGGGCTGC  
69201 TCACACCATG ATGCTCTGTC TTTGTGGCTT GAGCTCAGGG AATCAGCACA  
69251 GCAAGTTGCT ATTCATTGA GAGGGTTTAC TGTGGGCATC TAGAATGTCA  
69301 TCTTTATCCT TCGTCTTACT GGAGACTGTC AGTCTCACAT TTATTAAGTA  
69351 GACACTAGGG CCGGCTCCAC TGATCTCTCT CCCCCTGCT TCTCTGGTTT  
69401 GAGGCACAGT TTCAGAGAAC CTGAGGGACC CGGTGGGCTC AGGCGGCCTC  
69451 AAAGCAGCAG GTCACCTGAC CAGTGGAGTG ACCACAGATT CCAAGGTGTG  
69501 ACCGAGTGAA AGGGCTTATA TCCCAATGC CTGACTGCAG TTAAACCCTA  
69551 ATGAGGTATG TGGATCTTCT AGAGGAAGGG CCAGGCCCTT TTAATAAGGA  
69601 CCCTTCTGAA CAAAGAGACA AGATGCTAAT CCGAATTCCA CTAGACCAA  
69651 GTTTGATGTC CTAGGGCCAG CCGCTTAACC CGAGCTGGGG CTCAGCAGTT  
69701 AAGCACATAG AGACACAAA AGATGCATCC GTCTCTAGAA TCTTACCCTT  
69751 GAGATGTGAG GGAGTGTGCA GACGATTGTA AATGGGTAAC TTCCTGCAGA  
69801 GCTGGTGTA TAATAAAATA TAGCTACCAC TTAGTGATTG TTTACTTTCC  
69851 TCTAGACTCT GTTCTAAGTG CTTGAATCCT CTAGCTCATT TAACCTTGC  
69901 AAGAAGCCTA CAAAGTAGGT ACTTTTTTTT ATTCCTTTTT TTTAAACAG  
69951 GGTCTTGCTC TCTTACCCAC ACTGGAGTGC AGTGGTGCAA TCATGGTTCA  
70001 CTGTAGCCTG GAATCCTTAG GCTCAAGCAA TCCTCTGCC TCAGCCTCCT  
70051 CAGAACGTTT CTGGGGGTAG GTTGGTCAA TCCCCTCAGA GTGAGCAGGT  
70101 TATCTCACTC CCTGGAAGGC TGGCTTCTCC CCGCTCTC TTCGGTGCTT  
70151 GCCTCCAGCA AGTTACTGAA GTCTCAGAG GCCTCTCCAC CGTGAAATGG  
70201 AACTGTCTG TCTGTGGGAC TACAGGTGGA TACCACCAGA CCCAGCTAAT  
70251 TTTTAATTTT TTTTTTTTTT TTGGTAGAGA CAGGGTCTCA CTGTGTTGCT  
70301 CGTCTGGTC TGAACCTCCT GGCCTCAAGC AATCCTCCCA CCTCAGCCTC  
70351 CCAAAGTGCT GATATTACAG GTTTGAGGCA CCATGCCAG TCTGAAGTAG  
70401 GTTCAATCAT CATCTCATTT TATGGATGAG GAAATAAATC CCAAGAAGTT  
70451 AAATAACTTG TCCAAGTCCA GACAGCCAAT AAGTGATTAA ACTTGATTTT  
70501 GAGCCCTGGG AAGCCAGACT CCAGAGCCCA CACAACTGAA CCCTGTGCC  
70551 ATACTGCTTA CTTGCATCAA TGGTGAGTAT CCCCTCACTA ATATGTAGAC  
70601 CTCTTCATAA AGCTTTTACT CCAAGGAAAA GGCTGGAGGG AGAAGGAAAC  
70651 ATGATTCAAG AAATGGGCT GTCTGGCATG GTGCTATAGC ACTCCACGTG  
70701 GGGAATATTG TGTTTTCAAA GAAAGGGTGT GTTAGAAGGG GAATGATCAT  
70751 GGACGTTATA TCAGATAGAC TTGGTCCCTC AACACCACTA AACCTAAGGC  
70801 CCCTCCTCAT ATTAAAGGGA TCACAGTCCT CATTAGGATG ATTGTGGGGA  
70851 GTGAGTGAACT TAGCAGAGT GCCTGGCATG TCACTGGCAT CAGGAAATGC  
70901 TATTTCTTTC TCCCACCCGT CTTTCTTCTC TCAAGCGAAC TGAGTAGACA  
70951 AAGATAATTA TACCTGGAGT ACTTGCAATT CTTTGGCAGT AGAATAAAGT  
71001 AAATTAATG TATTTTGA GTTGAGGTTT CCATGAACCT GATTGGCGG  
71051 TCACTGTGTC CCAAGAAAGC CTTTATCTTT GACGTCTCTA CATGCCGCAA  
71101 TTGCTTATCT CCCTGTTCCT AGTGCAATTG TCTTAGAAGC TTCTATACTG  
71151 ACTAGTCTTG GAGAAAGCCA TAAACATTC CTCTTTTGTG ATCCTCAAAG  
71201 AATAAAATCG TGAGGAGCCT TCGCTGACTG ACGGGGAGT GTAGAATGAA  
71251 TGCTTCGGTT TGCAGGGATG ATCATTGGCA GCAGTCTTTT TTCAGGTTAT  
71301 GAATTCTGAT GTTTCCAGTA TGTTGAAGA TTTTGAGTGT CTTCAGGGGA  
71351 GCTCGAGTGG TCCCATGGCT GCCATTCTT CTGGTCATAG CCTCGCTGAA  
71401 GGGAATAGCA TTTCACGGGA GTGGGTTTAG GGTGGATGA GGCACCCATC  
71451 GGGAAGGACA TGGGATTTTT CATTCTAAGT GCCTTGCCAT AAAGCAAACG  
71501 ACAGGGGTCT ATTCTCTCT CTCTGGAGAA TGTTTCTGGG GGCAGGTTGG  
71551 TCTAATCCCC TCAGAGTGAG CAGGTTATCT CACTCCCTGG TAGGCTGCCT  
71601 TCTTCCTTGG CTCACCTCAG TCCTTGCCCTC CAGCAAGAGG GGTCTCTCCA  
71651 ATGCAAAATG CTCACGTCT GTTCATGATA GTTTTCTGT CTGAAGAAAG  
71701 TCCCGGGGCC TTCATCTGCA TGGCTGGGGC TAGGTCTGGA ACTGCCTGGA  
71751 GCATGAGCCT TTTGGGGGGT CTCTTCCAC CTGCTTTGTC TCTCTCTCTC  
71801 TCTCCCCCTC ACCCTGACTG GTCCAGTGAC TCTTTATGTT GGTGAACAGA  
71851 AACTTTACCA TTGGTTTTCA CTTTATGACG TCTATGGGCT TCCCCTCTCT  
71901 GCCCCAAGA TGGCGTCTCA CTCTGTTGCC CAGACTGGAG TGCAATGGTG  
71951 AGATCTTAGC TCACTGCAAC CTCTGCCTCC TGGATTCAAG TGATTCTCCT

FIGURE 3X



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

72001 GCCTCAGCCT CCCAAGTAGC AGGGATTACA GGCTACTTCA CCACCCAGC  
72051 TAATTTTGTG ATTTTGTAGTA GAGACAGGGT GTTGCCAGGT TGGCCAGACT  
72101 GGTCTCAAAC TCCTGACCTC AGGTGATCTG CCCACCTCAG CCTCCCGAAG  
72151 TTTTGGGATT ACAGGTGTGA GCCACTGTGC CGGCTAAGGA TTTTTTTTTT  
72201 AATCCTTTCC AAATAGAGTT TCAGATACTT TGCTCAGTAC TGTGTTTGAT  
72251 GAGTATTATT TGGCAAGATT TATTATTTTT TCATTAAAAA ATTAAAAATG  
72301 ACCTATAATA ATTGTATGTA TTTATGAGGT ACCTCGTGAT GTTTCATAC  
72351 CTACAATGTA TGATGATCAG ATCCGGGAAA TTAGCATATT CATCATCTCA  
72401 AACATTTATC ATTTCTTTGT GTTGGGAACG TTCAATATCC TCCTTTTAGC  
72451 TATTTGAAAC TATATACTAG ATTATTGTTA ACTGTAGTCC ATCCTGCAGT  
72501 GGTATAGAAC ACTAGAATTT ATTCTGTGTA TCTTGCTGTA ATTATGTCCC  
72551 GTTTAACAAA TCCTTCCTTA TCCTCTGCTC CCCTGACTCT TTCCAGTCAG  
72601 CATTATTTAT TAGGCACTGA TTCTGTGCTG GCTGGGTGCT AGAGAGTTTA  
72651 CATATATTAT TTAGCTTCAT TTGCCTCTCT CCATTGCACC AAGAGGCGGC  
72701 CACTGTTGCT GCCCATTTT ACAGAGGGTA AAGTTCTTGC ATCTAGCTAG  
72751 TGACCAAAGC AGGACTTGAG TCTAGCTAGA TCTCTCTGAC TCCAGAGGCC  
72801 ACGCTCTCTT AATCGTACTC TCCTTGGCTT GACACGGTGG GCTTAGAGAG  
72851 TACATAATTG GATCAAGACA AATTCCTCCT GACGAAGGGA AAACCCACTC  
72901 AAACAACATG ATGAGCAGGC TCCTTTGTGA CAGTTAGTGC TTGCCTTCTA  
72951 ACGCAGAGCT CTCTCTCCTG TCCTCTTCCT GTATTTGTAA CCTTCTGAC  
73001 ATACAGAGAG CCTGCATGAC AAGGCTGGGG TGCCAGATTG TTGGCCTCTG  
73051 GCTTACTGAC TCAATTTATT GGCTGTGCGC ATTGGGCTG ACTCTACCAT  
73101 GTTTTAGTGG AGAAAGATTT AGTCTAAGAT GTGGGCAGCG GCATGTGAGG  
73151 AGTGGGTATT GTGCTGTGGT CCTGGGTATG AACCTTTGAT GTTGTGATGG  
73201 CAACCAAAGC TGCTATTCTG CAGATGAGAG GACTAGATAT TATGAACTGT  
73251 CAAACTGTTC TCTCCATAAC CAAGGAGATG TTGGTAATCT CCTTGGTAAT  
73301 TTGCATGACC CATAAACATT TCCCAAGGCT GTGGCTCTGC CCTTCTGCCA  
73351 AGACCCGAGT CACTCACTTG CTCACTCACT TACTCATTTG CTCACTCACT  
73401 TATTCACTCT TTCAATCAAC AAACCTGTG ATTGCCTACT GTGCTAGATG  
73451 CTGGGATGTA ATGGTGAATA AAAGACAGAC ATGGTCCCTG CCTTCTTGGA  
73501 GCTTATAACT AGGATGACCA AATGTCCCAG GTTTTGTGGT TCTGGAGTAA  
73551 TTGTTAATAG TGCCCCCTTC TCTCTCAGAA GTGTCTGGG GCTGGGCGTG  
73601 GTGGCTCATG TCTATAATCT CAGCACTTTG GGAGGCTGAG GCAGGCGGAT  
73651 CACTTGAGCT CAGGAGTTTG AGACCAGCCT GGGCAACATG GCAAAACCCC  
73701 ATCTATATTA AAAAAAAGT GTCTTGTTT GAAATATAAA ATATATAGTG  
73751 ACCCTACTTA TAGACAGTGG GAGAGCCAAA CCTTATGCAT GTTATTACAC  
73801 AAATAATTGT AACTAAAAGC CAGATGAAAG TTGCAAAGGA GAGGGAGCTA  
73851 GAGCTATGGG ACACCCAAAT AGGAGAACTG ATTTAGTAGG ACAAAGATTC  
73901 CAGGCAGAGA GGGCTGAGTC AAGGCCCTGG ATGGGAGGAA GCAACATGCC  
73951 ATGGCTGAGG ACTTGAGAGA AGTGAGCAA TGTGGCCAA GGGCATTAG  
74001 CAAAGGGAAC TTAGAAAGCA ATTTGGCTGG AGACAGGCAG GAGCCAAACC  
74051 ACGCAGGTGC TGATTCTGAA TTTTATCTTA AGAGCACTGT GAAGCTTACA  
74101 GTTATGTTTT CAGTAGCAGA GTGATATAAT CTGGTCAATC AGTACATTGC  
74151 CATTTTGGTT CTTCGTATAA ACCCAAAGGG TTTTAAGTTA TTTGTTCATT  
74201 AATTCAATAA CTAAACATTT ATGGAGTGGC AACTGTGGCA CTCTGCTAAG  
74251 TGTTTTGCTC TGGAGTTCTG AACTCAATTG TCCTCAGTGG TGCCAAACT  
74301 CAACTCTTGG GGAAGCCTT TATGGGCCCT TTATGTTGGG TCGTGTCTG  
74351 CTTGGCACC AATTGCCCCC ATTTGCTAGA CTCTCTTGA TGACCTTTAC  
74401 TTTTCTCTGT CCTCTTTCCA TGACTGTGAG CTCTTTGAAG TTGAATCTAT  
74451 GTCTTTTATC AATATATCCC TTCTGCCTGG CACAGTGGCT GGCCAATAGA  
74501 AAATGCTAAA GGCTTGAGGA ATGAAGGAAT GGTGCTTTT GTGTCTGACC  
74551 TTTTTTTTTT TTTTTTTTTT TGAGACAGAG TCTTGCTCTG TCTCCAGGC  
74601 TGGAGTGCC TGGCATGATC TCAGCTCACT GCAACCTCCA CCTCCTGGGT  
74651 TCAAGCGATT CTTCGCTC GGCCTCCCTA GTAGCTGGGA CTACAGGTG  
74701 GCACCCACAC GCCCAGCTAA TTTTGTATT TTTAGTAGAG ACGGGGTTTC  
74751 ATCATATTGG CCAGGCTGGT CTTGAACTCT TGACCTTGTG ATCTGCCAC  
74801 CTCGGCCTCC CAAAGTGCTG GGATTACAGG CATGAGCCAC TGTGCCAGC  
74851 CTTTGTATCT GTTTGAAGAC CAAGAGCCCT TCATTAGAA CTTTCACAGA  
74901 AGGAAAGCAA AAAATTCTTT TGTTTCTGTT TTACAAGTCT TTTCTTTTGG  
74951 GTCTGGTTGT CAATAGTACT TCTCTGGATC CGCCTCCTGT ATTCAAGTGA

FIGURE 3Y



Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

75001	TTTTTCTGTC	TCAGCCTCCT	GAGAAGCTGG	GACTACAGGG	GTGTGCCACC
75051	ACACCCAGCT	AAGACAAAA	CTCACCTTGT	TGTCTTCTTT	ATGCATGAGC
75101	AGATTCCCTT	GGTATCTATA	GCCGTCGAAG	CTTTACGTAT	TTCCCTATTT
75151	AGGGACATAA	GAATTTTATG	GAAAGCAGCG	TGTTGGAAAG	CACGGCACCT
75201	GAGATGTTCA	TGGAAATCCT	TGTTGTGACT	TCAGAGTGCA	GATCTAGAGC
75251	AGCCCTCTGT	TTGTCTGCCC	TGGGCCATCC	CCTATTTCAA	GCAGTCTTTA
75301	GTCCAGGAAG	TTTAGGTAGC	AGCTCAGGCA	GCAGGTGAGC	TCTGGAGAGT
75351	GCAGGTTCCG	GTTCTTTGAG	CCCAGGGGCA	CAACTCTGAG	TTGAAGTGAC
75401	TCCTCCTGGC	TGTTGCTTTG	AATTTAGAAG	AGCTGCCCTT	TCACCAGCAA
75451	GGCAGTCACG	CAAAAGATGC	TTCAATGTGT	GCAAGATCAG	GCCTGCAGCC
75501	CCCAGCCTGT	GTCTACAGGC	CTCCGAGTCA	TTATTATTAC	GGTTTCTATC
75551	CCTGGGGTTA	TTGATTTCAT	CACTGTTTAG	TGAAGGAGAT	CTAAAGCTTT
75601	TAAGCCAGAA	ATTAAAGAGG	TAATGGAAAT	TGGCATGCCA	CTGGAAAATG
75651	AATTTGCAAA	TGAGAAATCA	ATGTTCTAAA	AAAACCTCCA	TAAAAATAAA
75701	ACCAAAACCC	AGAAGTGAAT	GCTCCTGTGA	CTGCATTTTT	TTCCAAATGT
75751	GCATGGGTTT	GTTCTCCTTT	AGAGTGTGGC	TGTATACATT	ATGGAATAAT
75801	GAGATTTTGA	TGGTGTCTCG	TTCTTACAAT	TGCTCTTATT	ACTTATCACA
75851	ATACAATGTA	TTCATTTATA	TAACATAATAT	TTACTTAGTA	CCTATAATGA
75901	AGCAGGTGCT	ATGTTTGGCT	CTAGCGATTA	AAAAACAATA	AAAAATGCAA
75951	GATGCCTCCA	CCCTGTCTCT	AGGGAGCTTG	AGGTTTCAGTA	TTAATTATAT
76001	CGCTAGCCAA	TTCTGGCATG	GTGCTTACTG	TGGACAGGAA	CTGCTCTAAA
76051	TGCTTCACGT	TGTAGTAATC	ATTTAAATTT	TACATTGATC	CTATGAAGTG
76101	GGGTAAGCAA	CAGAGGAACA	GAGAAGTTAA	ATAACTTGCC	CAAGCTGAAG
76151	TGAGAGGTGG	AACTGTGATC	CGGCCAAGGC	AGTCCGGCTC	TAGAATCCAT
76201	GGTTTTTAGC	CATGATGCTC	TACTCTAGTG	GATAGTTACA	GCCCAGTAGC
76251	TATTGGTTAC	TAGATTGGTT	CTAGAAGACA	AGGAAGCACT	CAGGTCCTTA
76301	GTACACAGAG	AGGAGTCTCT	GACTCAACCT	ATGGGACCCC	CAAGAGGACC
76351	TTTATTACCC	TGTGAGTCAA	CTGCAGAGAG	TCGTGATTAC	CTCCTGGTTG
76401	TCCTTTAGAG	TGGCAGGGCT	TTGTGTCTTA	ACATAAGGTG	TTGAAGCTGG
76451	GTCACCCCTT	TCGATCTAAA	ACCAATGTCC	ATGGGTTATC	ATTTCAGGTCT
76501	GCAATTAAGA	GTAGCTTGTC	ACTTTATATT	GGGAACATTT	ATTTTTCCTT
76551	CCTTCTCTAT	GGAAATGGGC	AGAAGAGATG	AAAAGCCTGC	TGGTGCAGCT
76601	TAACTTTCCT	CAGTAAGTGA	GTGTTTAACC	TTTTGTTTTT	TTAAAAATGG
76651	AGATGAGACA	TACAAATTAT	GACTTCTCTA	TGTTGTCCTT	TTTTTTAGTT
76701	GGAAGAAGGT	GACATGACAG	ATGAGCTTTA	GAAAAATGTT	TAGAAGGTGA
76751	ACAGAGAACT	ATTCTGTGAA	GATAGGAGGC	TAGAGTTAAA	AGAGAGGACT
76801	TTTAACCACT	CTCAGCTCTG	ACACTTCCTA	ACTACTATAA	CCTCACAGGA
76851	TTTTGTGAGG	ACTAAATAGG	ATAATAAGGC	GGAGTCTGCC	ACATTGCAAG
76901	TGCTGGCAGC	TATGATTAAT	TTTAGGAGTA	TTCTAGAACT	TTCCCTGAAG
76951	TTTCTAGCAT	TGCTGCACT	TCCTTGTTTC	TCCCCTTATC	AAACTATGCT
77001	CAGGGAGATT	TGGTGACTCA	TTCTTAAGGA	GGCACAGAAA	ATGATTTTTT
77051	TTTTTTTTTG	CACAGAACT	TGTTCTGTAA	AGGGCAGTCT	TGCTCTGTGG
77101	AGGCTGGAGT	AAAGTAGCAC	GATCATGGCT	TACTGCAGCC	TCTGCTTCCT
77151	GGGCTCCAAC	GATCCTCCCA	CCTGAACCTC	CCGAGTGGCT	AGGACTACAG
77201	GCATGCACCA	CCATACCTGT	GTAATTTTGT	TATTTTGTGT	AGAGATGGGA
77251	TTTTGCCATG	TTGCCCAGGC	TGGCCTTGAA	CTCCTGCGCT	CAAGCAATCC
77301	TCCTGTCTCA	GCCTCCCAAA	GTATGGGGAT	TATTGGCATG	AACTACCATG
77351	CCCAGTGGGA	AATGAAATCT	TAATTTGTGA	TTAATATTGA	TCACTCAAAA
77401	GCAACAAAGA	GCCCTAAGGT	AAATAGCTAC	AATAAAAGCA	AGATAGCAGA
77451	AGCCTCTCTT	TTTCATGATG	TTATTAATCA	TCTAAATATT	AAATTCAGG
77501	CTCTGTTCAA	TGCAATGGCA	ATGGAAGGAA	TAGTAACCTT	CCATTAGTGT
77551	CACAGTGTA	TGAATCAGAA	TTCTTGTAAG	TGCTTTTGTA	GTCCAGTACA
77601	GTTTTTTAAA	AATAGAAATT	GGATAGACCC	ATTTTAAATG	GGAATGATCT
77651	CAAGTGACGA	GAGAGCAAGG	CATATATCAG	ACACTCTCCT	CAGGACCAGG
77701	GCAATTTTTC	AACATCAGTT	GGCAAAATTT	TTATTCTGCC	TGTAGAGTGT
77751	AAGTCCAAAC	TGAGATGAAA	GAGTGACAGC	TTGTTAGTCT	GAAAGTTTAT
77801	TGATCATATC	AAAGTATACA	CATCTATCCC	TGATTCCTTA	GTGGACTTGA
77851	TACTTTCCTC	GTGGTTTAAA	ATTTGTCTTA	TTTCATCCTT	CCATGTAGTC
77901	AAAGAGAGAC	AGAGGAAATG	CATTTTCCAT	CATAAGGCAC	AATTTGGAAG
77951	CTACAAGAGT	GCCCCCAAAT	ATGGCCTGGT	CTCATAAGAT	AATATTTAGA

FIGURE 3Z



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

78001 TAGATTAGTC GTTAGTGAAT ACCCAAGGGG CTAATGAATT GAGTCTCAGA  
78051 AATCCCCATT GTAAGGGATT AACTTGTAGT AGCAAGGAAA GCTAGCGTGT  
78101 CTAAGACCAT ACGCCATGAG CAAGCATGCT AGCCCATCCT GGGTTTCTCT  
78151 CTCCTCTTCT CCAAACAGAT TCTCCACTTG CCCTGTCCTT TCTGCCAGTG  
78201 GCCTTCACCT TAGATTATA ACTAGGCTGT AAAGTTCTAA TGAAAACCTTG  
78251 CTGCCTGGCT CCCTGAGGAC CTGAGGAAAG GCTAATATTT GCACATAACT  
78301 GGGTACTTAG GGCAGTAGGA AAATACACGT CATTGTAATA TCCACCACAG  
78351 CACTGAAGGT GCCTCTTTCT TTACCTTTT ATGGTCTGGT CTGCTTTTAA  
78401 TGAGGGACTC TGAGGTGGTG TGGCAGTTAG GAAGGCCACT TGATTGGGGC  
78451 GTGTCCACTC AGGTCAGCCC AGGCTTGACT GCCATATTGG CTGTGTCTGG  
78501 GTGGGAGGTA AAGGCACACG TCGTCAGCC TGCATTCTCT TCCCTTCGTC  
78551 CTATTGCAGG TAGCTGGGTG TCCCAGGCTG GGTGTGAGCC AGCCTGCCCT  
78601 TCCCAGATGT GGGAAGCTGT GCGTCTGAGA TAGAGAAAAA AGAACTCAAG  
78651 GTAGAGAGAA GCGCCTTTGC AGAGTTCAGG ATGGTGAAT TCCTGTTGAC  
78701 AATTCTAAGA GCCTCTTTTG CTAGCTTTGC TGCGCACCAG ATGTGTACTG  
78751 TACACACAGC ACTTTACCAT TCTCAGTGTC ATGAGTCCCT TGGGGGCAGC  
78801 AGTGTGCCCC ACTGTACTAG GTCTCACCAG GGGCTGAGTT AATCTGTACT  
78851 CTAGGAAGTG CTCCGAAAGG GTTCTGTGTA CTAATACTCC TGAATAAGAA  
78901 ATGACAAGGC ACAGTGCCCTG AAGTCTTATG TTCATTTTAA GACAACTCTG  
78951 ACAACAACCT TGTATGGAAG GTATTAGTCC TCATTTTATA GATGAGGAAA  
79001 TCAAGGTTCA GAGAAGCTGA ACAGCTTGCA AGGCTGAATG GTTACCGCTT  
79051 TATCCAAGAA CTTTCCCTGT TGCAAGAGTA ATGTATGAGG TGCTCCCACT  
79101 GTCTTCTCTC GCACTGAATC CAAGACATCT CTGAATCAGC CACAAAAGTG  
79151 CCTCACTGGG TGTGGCCCCA GAAATCCTCT CTGAGACCCT CCCATGGTTG  
79201 TTTGAAATAT TGTGAACTCA CCTTGCCCTT GGAAGATTC CTTGTGTGGC  
79251 TGTGGAATAT TTATATGTGA AATACTTCTG AAGCAGGTGA AAGAAAAAGT  
79301 AATTGTGGCA AGCAAATTAA ATATTGTCTT TCCACTTCAA ACCCGAGGCT  
79351 CTTGCGCCAT AAATGTGTGA GGAGGTGGAG AGATGTTGCT GCCCTGCTGC  
79401 TGGGGTTTGG AATCATTAGG GGCATTTTGG AGTAGTAATG AATGTGGTCT  
79451 GCCAGTTGCC TTTCTCACAG AGTTTGTGGC TTTCTCCCA ACTGCTAATG  
79501 GCTGGAATAG GCTCCCTTTT TTTTTTTTTT TTTTTTTTTT TGAGACGGAG  
79551 TCTCGCTCTG TCCCCCAGGC TGGAGTGAGC TGGCGCGATC TGGGCTCACC  
79601 GCAAGCTCAG CCTCCCTGGT TCATGCCATT CTCCTGCCTC AGCCTCCCGA  
79651 GTAGCTGGGA CTACAGGCGC CCGCCACCAT CCTGGCTAAC ACGGTGAAAC  
79701 CCCGTCTCTA CTAATAATAG GCTCACTTTT AATACATTTT AGAAACCACT  
79751 TTCCACATTC ATGCCCTCAT CCTGCCTCAA TCCCTGGCTA AATCTCCAAT  
79801 TCATAATCCC TTTGCTGACT GTGCCGTTCA GGGAGTAAGA ACGTGGTGGA  
79851 CGCAGCCACC ATTGTACCCT CAGATGAAGT CCTTCTCGA GAGACAAACA  
79901 GTCTGTTAGT AAAATGACCA TACATCCTGG GTTGCACCTG TCCTGTGGTC  
79951 CCAGCATAGC TGTTAACAGA GCTACCTTTT TATTTGCAAG TTCCCTGCTT  
80001 TGGCAATAG ATCAACTGGT CATCCAGCTA TTAGCGTCCA TGCATAAAGC  
80051 ACGAATCTGT TGTATTCTTC AGCCAATCTG AGACAACCAA GAGATTACTG  
80101 CTGCACCTTT GTTTGTCTTT CTTTTTGGTG GCACATAAGG AAACAGAGAA  
80151 ACAGATGATC TCACCGAGTG CACAGATCAT AGGAGAAAAG CCACAGACAG  
80201 TTAGTGGTCC CCTGTGGGTC ATCATTCATC CCAGTGCAGC ACTAACGCTC  
80251 ATGATGGTAT CGCACGCTGT CTGGAGCAGT GATTATGTA GCTGGCGTTG  
80301 CCTGATGGGA GGAAACTGGT GGGGAAAACG TGGTGGGGGG TCCTGTGAGG  
80351 GGTCCAGTTA CCTCCTCCTC CTCTCTTTCT AAGCGCATCA GCTACAGACC  
80401 CGCCTCACTT TGTGAGAGGT TGCAGTTTCT CTCTTCTGCC TGTGAGGTAG  
80451 TCCTAATGCA TGGTGTGGGG GAGGGAGGAC AAGGGAGAAA GAGGGGCACA  
80501 GAATCTTTTA GATCCTGCCC TCTTTCAAGT CAGCTCTCCA CCTCTTTTAA  
80551 AAAGAAACAA ATCATTATTA TTTTGTGTGT TTTGTTGAGT TGCTTTTGTG  
80601 TTTGTCTAAT TTTAGAAAGA AGTAAAATGT TTTCTCTCTA CACCTCTGGG  
80651 AAGATAATAT ATCTAAATTT ATTAGTTTAG TTTGTTTATT TATTATTTGT  
80701 TAACTTAAAA CATTCACTCC CGTGCCATT ACTGGGTAGC TGAGTGGGTG  
80751 CTGGAAATGC CAGCTTAGAG GCTAAAAAGG AAATTCAAGG AGGAATGGAA  
80801 TTAAAATGTA AAGTAATGCC CTCTTATCTA CAGTATCCCC TCGTATCTAA  
80851 TTATCTGTCT ACCTCTATTG AATTATCTGC CTGTGTGAAT TTTTGTATCC  
80901 TTGTAAGATC TCTCTGAAGT TGATAATGGT TGAAGTTGTA AGTGAACAAA  
80951 TGATGCTCAC TGAGTCTGAA ATTATTAAAT AACATTGGTT GAACCTCTAC

FIGURE 3AA



Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

81001 CCTGTAACAT CTTTTGAGCT AAACGTGTCC GAGCTCAGTT GTGCCATTTC  
81051 ATCATCTGTG TGCTCATACA TTCTAATGGG CTGCCCTCCA TTCATTCTGT  
81101 CAGCCTGAAT GCAGGTAATT TTTTCTTTTT TTTTTTGAGA CAGAGTCTCA  
81151 CTCTGTTGCC CAGGCTGGAG TGCAGTAGCG CGATCTCGGC TCACTGCAAG  
81201 CTCCACCTCC CAGGTTACAG CCATTCTCCT GCCTCAGCCT CCCGAGTAGC  
81251 TGGGACTACA GCGCCCGCCA CCACGCCTGG CTAATATTTT TGTATTTTTA  
81301 GTAGAGATGG GGTTTCACCA TGTTAGGCAG GATGGCCTCA AACTCCTGAC  
81351 CTTGTGATCC ACCTGCCTTG GCCTCCCAA GTGCTGGGAT TACAGGCATG  
81401 AGCCACCGTG CCCGGCTGAG AAAAATCTTA AAAGCAAATG CATTTAATTT  
81451 TAAATGTTT TACTTGAGCT CAAACAATTA AGATCATTTG AAAATACTTC  
81501 GAAAATTAAT AAAAATTAGA ACTGTAACT CAATTAGAAT TATTATTATT  
81551 GAGTTAAAAA TGATGTTGCC AATTCAAATG GTAACGTCAG TTATAACCCG  
81601 AGTTTGCTGA TTCATTGAA TTCTGGTTGT TTGCCAGAGT TTTTCAGAGT  
81651 CATAAGATCC AGATAGAAAA TCAAACCTCA TTCTCAGCAT TGGGGCTTTC  
81701 TAAAGCCTTG TCAGAAATTT GGTGACTCGT GGGAGAGCTT ATTTTCTCC  
81751 TTTTCATTGA GTCTTGCTCT CAAGGAGTTA GTTCAGATCA TCAGTGGCCC  
81801 TACTTTGCCC ATAACAAGCC TTATGTATAA TTTCCACAAA ACTGCTTCCC  
81851 CAGGGCATTT GGGTGCATTG GCCATTTTAC TGAAGATTG GCAGGGAGAG  
81901 AGGAATTGAC GTCACAGATA GAACCCAGCT GAAATTGGAT ACTAGATGGA  
81951 GTTGCTCTTC AAAGACTTGG GCATTGCCGC TACGGAGCCT GAATTTCCCA  
82001 CCTGTCAGTT GACACCCCTT TTTGTGCTTT TATTTCTTCT TGTCTCTCTT  
82051 TTTCAGGGCT TTTCCCTTTT CTCTGATCCT TCCCTCTTAG GGTATAAAAA  
82101 TCAACCTTTT CCTACTTTAA TTAATTTATT CTTTAATTTT ATTTTAACAC  
82151 AGAGCGACTC ATCTCTAATC AGCTTCAACA GCCAAGTGAA GTTTGGTGTC  
82201 TCCATTTTGA TGTTCAAGGA AGTAGTCTAA TTAGAAATGA TCTCTCGTGA  
82251 GGTCTCTTCT GCCTAAATTC TGGGACAAATG GCTATCCTCC TTCCTCATCT  
82301 GTCTGGAGGT GAAGATGGGA GTAGGGGAGG CAACATGCAT TCTAGGTACC  
82351 AAAGGTAGAG GAAAGGCAAA ACCATCCGCT TTGGGCCAGA CAGGGTTGAA  
82401 TCCTGGCCTC TTCACTTCCT GGCTGGGTGA CCTAGGACAA GTTAATTAAG  
82451 TTTCTTGAGC CTGTTTCCCC ATCTCTAAGG TGGGGGATAA TACTACTTTC  
82501 TTGCAAGTTA TGGAAAGGAT AGAATGGAAT CACACACAAG TTGTAGAAAG  
82551 GATAAAACAG AATGACGCTT CTAGTGACCC TGGCGAAAGG CAGGCACTTA  
82601 ACAACTGTTA GTTCCCTTTT CTTTCAACT GATAAACACT TTCCTTGAGG  
82651 GTTACATAGG TAAACATTA ATATTTATGA ATTGCATAAT TCAAGAAAAA  
82701 TGAAACTTGA AAAGGATTCT TCAGATTTT TGATGAAACA AATCATCGTC  
82751 CCCATTGTCT TTTGTGCAAA TCTGTGTTT TGTTTGCACT GCTGGGTTTG  
82801 CTTATGACAT TTGTGTGCAA TTCTCAGCAC CGTGAGACTT GAGTGAGCCT  
82851 AACCTCTCTT CACAGCTTGA TAGGAGTTGT AAATATTAGG TACTGATGGT  
82901 ATGATTTGAG GCAACCTAAG TGACTGAAGC CTAGAGCCCT CCCTGCGGTA  
82951 TTATTTCCAA GTGGGCTCAT CAGAGCTGAA TTGATAATGA AGATATAAAC  
83001 ACTGGTGAAG GTTTGTGGC TTGGTCTGAT GGTACTCATA CGGCACAGTG  
83051 AAAATGGAGA TGCTACCGGT GGAAAGGACT CACCATCTGT CTGCCCTCTA  
83101 GAGCAGAGCG GAACATACCT CTGATGATTA TGTGACCACT GTCAATTAGG  
83151 CTGATTTATG CAAAGACAGT CTGTACACAT CCCATGCAGC CAGATTTTAA  
83201 ATTCTAGGGT GCCAGGTTTT GCTAGAAACA GTGGCCGGCT GCGGTCTTGC  
83251 ATAATATTCC ATGTTCTCTT AGAGGCAGAA AAGAATAGAC TCACGACTTG  
83301 ACAGAAGGTG CTTTTTCCCC CTGTATCATC CAGTCAATTG TCTATGAGTC  
83351 TGCCAAATCT AGCTCGCAGC ATCTTTTGTG ACAACCCCTG AGCTGAAAAT  
83401 GGTTTTTGCA TATTTAAAAG ATTATTTAAA AAAAGAAAAA TATCCAACAG  
83451 AGACCCATAT GTGGCCCAAC AGGGCTAAAA TATTTACTAT CTGACCCTTT  
83501 ATGGAAAAAG TTGTTGATCC CTGGTTCAGA GTGTTTGAAA TAACTCAGAT  
83551 GAAAGAAGGC AAAATGTAAT GATGATTGAC TTTTCCAGTT GTAATCTGAT  
83601 TTGTGACAAC CACTGTATGC CTGTTTAAAC AAAGCTTAAT GGGCATTACT  
83651 TAGGATAAAT GTAATTACGT TTCAATATTT GTGTCTTGCT CTCCCTACAT  
83701 AGGGTTATTC CAGGTTTGCC CAAGGAACAG AGAGTCTGTT TGTGTTCTA  
83751 GAAGTAGCTC CTGTGTCTGT CACCTCCTCT CCAAGGCTTC CACCTGTCGC  
83801 TTTTTTATCC CAGTTCACCC GTGTGAACAG CATGTGTTTC GGCTGCCATG  
83851 ACAGCACGTC CTACCTTTTT CCCTGGCTTG AAAGAAGATG GCAGGGGCCA  
83901 GCTCAGGAAG AACTGTACG GAGTTTTTTC ACCTTCTCCT GCTCGTGATG  
83951 AGGCTAGGGA GGGATTTTTA GCGTATCTTT AATTGTTGCC GAAGTATGAA

FIGURE 3BB



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

84001 CTCGGGGAAG GGGGCAACTG TGAAGCAGTG ATGCATAGAC TAAGTCTCCT  
84051 GGAAGAAGCA GGGCTTGAAT TAGACCCAGA AGGATGGGCA CCGTTTGTGG  
84101 GAGGGCACAG GTACATAAGT ACAGGGAACA TGTCATGGAG TGTCTGCCCC  
84151 AGAGTGGGGA ATTTATAGCA GTGTGAGATG AAAATGGGTC ATCATTGTGG  
84201 CCAGTTTGTG GGAATTTTAA AGGTGTATGG AATTCCAATT CAGTTATCAT  
84251 CAAGGAGTCA TTGTAGCTTA TTTTAAAAAA GAGCGATGTG TGTGTGTGTG  
84301 GTGTGGGGGT GGGGGAGAGT GGAATGACAA TCATGAAATT GGCTACTGTT  
84351 TGGTAAACCC TAACCTGGGAG CCAGACATTT GGCTAAGGGT GTTACTTGGA  
84401 CCATCTCATT TAATCCTCAC AACAACCCTG TGGGGAAGGT ATTATCTCTA  
84451 GTTTGCAAAT GAGGAAACTA GGCTCAGAGA GGTTCAAACA ACTTGCCCAA  
84501 GGTTCTGAAG TTAATAACGG CCACAGCCAG GATGGCTCTT AACTCCTGCC  
84551 CTGTGGAAC AAGCTCAACG TAAAACATTC TTACAAGACA GAAAAGAGTG  
84601 AAAAAGCAAC CAAAATCCTG CTTGCGGAA ATGCCCACTT TGGGTGAACA  
84651 TTCTTCTAGA CATTTTTGTG GTGTGTATAT GCACAGAAAC TTGTAACATT  
84701 TTGCATAATC TGGGCCACCC CATGCCCTGCA AGCTTCTTAT AAATGTCACC  
84751 ATATTCTATA TCCTAGCGTT TCCCCCTAT TTAACACTAA TTTTCTGATT  
84801 TTCACAACTG GGTGCATAGT ATTTTGCTTT GGGATGCTAC CATCATCCAC  
84851 TTAACCAGTT CTCTCTAGAT CACTGCAGGT TCTTGAGTAG GGGAAATAATG  
84901 TATTGGAACC TTTTCTTTT TGAAGAAAAA AAAAATAAAC AACTTTTAAA  
84951 CTGAGTCTTA TGCTTTTTC CTTTCTTTGC AGCATGCTCT TGATGCTGAC  
85001 AATGCGGGAG TCAGTCCAAT AGGAACTCT TCCAACAACA GCAGCCACTG  
85051 GGACCTCGGC AGTGCCTTTT TCTTTGCTGG AACTGTCATT ACGACCATAG  
85101 GTACCCGTTT GTTTGCTAAT ATCTCTTCCT CTGCAGGTCA TCTTGAGTAA  
85151 GGGCGCTTAG TCAGTGTTTT GTCTCATAG CATACTAT AGTTTGAGGT  
85201 TCAGAGGAGG CTTACGAAAC ACTGTCGTTT AAATTAATGC AGTCATTGTG  
85251 GTGGCTTTCA ACAAAGCCA AAGCATAATG AAGTATCTCT TTTCCAGAA  
85301 TGAAAGGCTA GCAAACCTAA TGAAAGGTT AGAATGGAAA ATATGAGTTG  
85351 GTCGGTTGAA CTCGGGTAC TCATTTGAGC TCAACTTCCA TTTTAAAAAT  
85401 TGTACTTCTT ATTAAGTTA TATAGTAAGG AACCATAATA TTCTACAAAA  
85451 TTTTATATA AAAACAGTAA CATTCTGACC GTCTCACCTT TTCTTACCTT  
85501 CCCAGAGACT GTTGCTTTCA TCTGTTTTGA TTGTTGATTT TAACACTCAT  
85551 CCCCATGTCT TTAAATATCA TGCTTGTGCT ACTTCTGGAA TTTTCAGTTT  
85601 TGGGGATTTT TTTTGACTTT CCATTGTGGA AGATGAGGAG TTAGTTCCTT  
85651 CTTCTGCCT GCCTCATCAC AGAAGGGCTC TTTCTCTGCT CTCTGTCTT  
85701 CCCAATATTT AATTAGATAG AAGTGAACA TCTGCATGAT TTTGACTAGA  
85751 TAAATGCTTT CTGCAGCTGA TCATAGAGTG AACAGTGATG ACCTCTTCC  
85801 TGTATCAGTC TTTGTCTTAT TTTTGTATG TGTGTCTTTT TTTTCTGACA  
85851 CTTGGTGAGT TTTGTATTTT TGTCTTAGGG GTTAACTTTA TTTATTTATT  
85901 TATTTTATTT TATTTTATTT TATTTTATTT TATTTTATTT TTTGAGATGG  
85951 AGTTTCACTC TTATCACCCA GGCTGGAGTG CAGTGGTGCA ATCTCGGCTC  
86001 ACTGCAACCT CGCCTCACG GGTTCAAGTG ATTCTCTTGC CTCATTCTCC  
86051 TGAGTAGCTG CGATTACAGG CGCCACCAC CATGCCATAG TAATTTTGT  
86101 ATTTTATAGT GAGATGGGGT TTCACCACAT TGGCCAGGCT GGTCTCAAAC  
86151 TCCTGACCTC AGGTGATCTG CCCGCCTCAG CCTCCCAAAG TGTGGGATT  
86201 ACCGGCGTGA GCCACCGCAC CTGGCCTAGG GGTAACTTT ATAAGTATAA  
86251 TGGCATATAA TAATTTTAGT GTTCTATTCT TTAACCAGCA TGTATTCTGAT  
86301 CCCTATAACG GGTGATGATA TCTCTTTTCT CTCTTTTCC AACACAAAGT  
86351 TTTGGTGGAC ATCATCTTTT AAATGATTAA ATTTGCTTAT GTTTCTCTTA  
86401 TATGATTTGC CAGCTTTAAA TGATAACTCT TGGCACTCAG CTATTACATA  
86451 TAAGGCAGTC AGTGAACCTA GCATCTCAAT TTCCTTTCCC TCTTCCACTA  
86501 TCCACTCTTA TTCATGGTGT CATTCTATAT AAGTTGTATC TCACTTTATT  
86551 GTGCTTTGCT TTATTGTGCT TTGAAGATGT TGAGTTTTTT TTTTAAAC  
86601 TAATTTAAGG TGTATGGCAA TCCCGCATTG AACAAGTCTA TTGGTGCCAT  
86651 TTTTCCAACG TCGTGTGCTC CACTCTGTGT CTCTGCCACA TTTTGGTAAT  
86701 TTTTCAATA GTTTCAACCT TTTTCATTTT TGATTATATC TGTTAAGGAG  
86751 ATCTGTGGTC AGTGATCTTT GATGTCATGA TTGTCATTGT TTTGGGGTGC  
86801 CACAAACCAT GCCCTTTGAA GATGGTGAAC CTAATCAATA AATGCCGTGT  
86851 GTTCTGACTG TTCCACCAGC TGGCCATTCA GGCATCCCAG ATCCCTGAGG  
86901 CACAATGTA TTGAAATTTG GCCAATTAAT AACCTGTCAG TGGCTTCTCA  
86951 GTGTTCAAGT GAAAGGAAGA GTCAGTTGCA TGTCTCTCAT TTTAAATGTA

FIGURE 3CC



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

87001 AATCTAGAAA TAATTAAGAT TGGTGAGGAA GGCATTTTGA ACTCTGAAAC  
87051 AGGCCAACAG CTAAGTCTCT TCTGCCAAAC AGTTAGCAAA GTTGTGAGTG  
87101 CAAAGGAAAT TTTGTGTTTT ATTTTTTTTG AGACAGGATC TCTCTGTGTC  
87151 ACCCACGCAG GAGTGCAGTG GTGTGATCAT GGTTCAGTGC AGCCTTGATT  
87201 CCTGGGCTCA AGGGATCCTC CCACCTCAGC CCCCTAAGTA GCTCAGACTA  
87251 CTAGTGTGCA TCACCATTCC TGGCTAATTT TTTAAACATT TTTTCTAGA  
87301 GATGGGGTTT CACTATGTTA CCCAGGCTGG TCTTGAACCT CTGGGCCCAA  
87351 GTGATCCACC CACCTTGGCC TCCCAAAGTG CTGGAATTAC AGGCAATGAGC  
87401 CACTGTTCCCT GGCCAGGAAA AATTCCTGAA AGAAATTAAA AGTGATACTC  
87451 CAGTGAGTGA GCACATGAAT GATAAGAAAG TGAACCAGCC TTATTGCTGA  
87501 TATGGAGAAA ATTGTAGTGG TCTGGATAGA AGATCAAACC AGCCACAACA  
87551 TTCCCTTAAG CCAAAATCTA ATTCAGAGCA AGCGGGCTCT TTTCAAGTTCT  
87601 ATAAAGGCTA AGAGAGGTAA GGAGGCTTCA GAAGAAAAGT TTGAAGCTAG  
87651 CAGAGGTTGG TTTATGACAT TTAAGGTAAG AAGACCTTTT GATAACATAA  
87701 AAGTGCCAGT TAAAGTGCCA AGTGCTAGTG GAGAAGCTAC AGCAAATTAT  
87751 CCAGAAGGTC TAGCTAAGAA AGTGGCTACA CTAAACAACA GATTTTCATT  
87801 ATAGACAAAA CAGCCTTATA TTACAAGGTG CCGTCTAGGA CTTCCATAGT  
87851 TACAGAAGAG AAGTCAATGC CTGGCTTCAA AGCTTCAAAT GATAGGCTGA  
87901 CTCTTTTGTG AGGGGCTATG CAGCTGGTGA CTTTATGTTG AAGCCAGTGC  
87951 TCGTTTACCA TCCAGAAAAT CCTAAGGCCC TTAAGGATTC TGCTTGCCCT  
88001 TCTATTAAAT GGGAACTTCA AAAGCCTGGA TGACAGCACA TCTGTTTACA  
88051 GCATGGTTTA CTGAAGAGTT TAACCTCACT GTTGAGATCT ACTACTCAGA  
88101 AAAAAGATTC CTTTCAAAAT AGTTCTGTTC ACTGACAATG CACCTAGTCA  
88151 CCCGAGAGCT CTGATGGAAA GGTGCAAGGA GATAAATGTT GTTTTCATGC  
88201 TTGCTAATAC TACATCCATT CTTCAGCCCA TGGATGGAGT AATTTTGACT  
88251 TTGAACCTT ATTATTAAAG AAATACATTT CATAAGGCTG TAGCTGCCAT  
88301 ACATAATGAT TCCTCTGATG AGTCTGAGCA AAGTGATTTG AACATCTTCT  
88351 GGAAAGGAGT CATCATGTGA GATGCCATTA AGAACATTTG TGATGAATTG  
88401 GAAGAGGTCA AAATACCAAC ATTAACAAGA GTTTGGAAGA AGTTGATTCC  
88451 AAGGCTCATG GATGACTTTG AGAGGTTCAA GACTTCACTA GAGGATGCCA  
88501 CTGCTGATGT GTTGGAATTA GAAGTAGAGT GTGAAGATGT GACTGAAATG  
88551 CTGCATCTCA TGATAAAACT TGAATGAATT AGGAGCTTCT TCTTATGGAT  
88601 GAACAAAGAA AGTGATTTCT TGAGATGGAA TCTGCTCCTG CCTGGTAAAG  
88651 ATGCTGTGAA CATTGTTGAA ATGACAACAA AGAATTCAGA ATATTATATC  
88701 AACTTAGTTG ATAAAGCAGT GGCAGGGTTT GAGAAGATTG ATTCCAATTT  
88751 GAAAAAAGTT CTACTGTAGG TAAAATGCTA TCTAACAGCA TTGCATGTTA  
88801 CAGAGAAATT GTGAAAGGAA GAGTCAATGG ATGTGGCCAA CTTCTTTGTT  
88851 GTCTTATTTC AAGAAATTGT CACAGCCACC CCAGCCTTCA ACAGTCACCG  
88901 CCCTGATCAG TCAGTAGTCA TCAACATCAA AGGAAGACCC TCCGCCAGCG  
88951 AAAGCATTAT GACTTGTGTA AAATCAGAT TATTATTAGA ATTTTGGTA  
89001 ATAAAGTATT TTCAAGTTAA GGAGTATATA TACATTTTTT AGACCTAATG  
89051 CTATTGTACA CTCAATAGAC TGTAGTAGAG TGTAACATA ACTTTTATAT  
89101 GCACTGGGAA ACAAAAAAGA AAATGTGTGA CTCATTTTAT TGTGGTGGTC  
89151 TGAAGTCTAA CTCACAATGT CTCTGACGTA TGCCTGTATA ACCTCAGGGT  
89201 ATGTAATTTA GATTTTAAAT TGTTACCCTG ATATTTGCAT TTGTTTATAGT  
89251 CGTAGCTCTA TAGTTAGATA TCATTAATGT TCATCTCTAG TCCTTTTGCT  
89301 GTGGTTTATC TCATGATCAC TTACTTGGCT GAAAGTCATC TTCAAGTAGT  
89351 TGCCTTAAGA ATGGCTCAGG GGAGCAATAT TCTGTGAGAT CTTGCATTGT  
89401 TCACAGTTGT AGCTTAACAT TTGAAGGATA GTTGAAACAA AATGAAATCC  
89451 ATTTTATTGA CTCACATTTT CTTTTTCTTT TTTTTTTTGA GACTGGGTCT  
89501 TGCTCTGTTG TCCAGGCTGG AGTACAGTGG TATGAACATA GCTCACTGCA  
89551 GTCTCCAACT CCTGGGCCCA AGTGATCTTT TGGCTTCAGC CTCCTGAGTA  
89601 GCTGGGACTA CAGGCGCATA CCACCAGGGC TAGCTAATTT TTAAATATT  
89651 TTGTAGAAGC CAGGCTTGC TGTGTTGCCC AGACTGGTCT CAGACTCCTG  
89701 GCCTCAAAGG ATCCTCCTAC CTTGGCCTCC CAGAGTGCTA GGATTACATG  
89751 TGTGAGCCAC CACGCCTGGC TTTACATTTT CTTTTTAACT GGTCTCACAG  
89801 GTGTTGCTCT TCTGTTTCCC AGTTTTTATG CAGCTGTTGG GGGAAACCTG  
89851 ATGCCAGCCT TTTTTTCCCC ACTTTTATAG GTGACTTTAT CTTTTTGTTC  
89901 AGTGACTTAA AATATTATTT CTCTTTCATC TGATAACATT ACTAGGTTTT  
89951 GACTCTTTTA TTGCATTAAA GTTTTCTTGA TTGACATCTT TAAACATTTT

FIGURE 3DD



MAY 6 2 2003

PATENT & TRADEMARK OFFICE

Docket No.: CL000858

Serial No.: 09/729,920

Inventors: GUEGLER et al.

Title: ISOLATED HUMAN TRANSPORTER...

90001 CTTTGCTGTG TGGTTTTGGT TTTGTTCTTT GGGAGATTAC AGCTATACAT  
90051 ATATTGTAAC TTCTTTGCTC ATCTTCTATG TCTCTCATTT CTCTTCTACT  
90101 TTTTAACCTCT TAAATCTAG TTTTCATTTT GTTAATTTTA TTCTCCCTAT  
90151 TCCTTTAGTT TGTATGTTTT CCACAATGCC TGTGCTGCCA TGAGCTCCTT  
90201 CCAATTTTAT TTTTTGTTTT TGTGATCAAT AGGGAATTTT TTCCTTTTCC  
90251 TGTTTCTTTC CTGAATTTCA TAGCTCACAT TTCATCTTCA CTTGTTGTTC  
90301 CATTTTTCCA CTGATTTCTT GAATTTCTAC TTTTGGCTT CTCTGTGAAG  
90351 ATTCTTAGAG ATGATTATTT CATACTGGT CACAAATTTT GTCTGATTTT  
90401 GGAAACATTT TTCTGGTGAG CCTCTTTCCA TCCATTGGTA AGTTTGTCTA  
90451 CTCTTTTCAC ATTTTTTTTC TTATGGAAGT TTTATATTTA TGCTGGGTCA  
90501 ACTTCTTTTT AAAATACCTG GCCCCAGGCA AACTGGATAT TCCTGGACCA  
90551 GCTTTCCTGCC AAATGATTTT ATGGAGTTGG GGAGAGGAGA GCAGGGTGAG  
90601 TCAGGGTACC ACCTTCCAGA CAGCACATCC TAACTCTCTT CATTCTGTG  
90651 ACAGAGTGTT TCTGCAATA GGGTCTTCT GTATTATTTT TGTCTACCT  
90701 CCCTGTTTTT TGAACCAGAT CAAGTTCAGG GTGGCTTCTG CTGCTCTCCC  
90751 TCTTTATCCT ATGTTTTCATG CTTGGTAAAA ACAGGGACAT CTCTTTTGAA  
90801 GTTCAGAGTG AGACCCTCCC CTTTATACTT GGATATTTTC GGATACTTTC  
90851 TGAAATTTAC CACTTTAGGG CCCTGTCTATC ATTTTCTGAG CTTCTTCTTT  
90901 TTATTTTTTG TTCATATGGC TTCTGTCCAA TCTCCGCTTC TTTTGGTAGT  
90951 TCTTACACAT ATGCTGGAAT CTCTGGATTA TATCCTTCTT CCAGCTCTGC  
91001 TGAAAATGAG TTTGAGGATT TTCTGCCCAC ATACAATTGT GAAGTAGCAC  
91051 TGCAACAAAA ATCTTCAATC AGAAGCAGGA GAGACACCCA GCAGTCACTG  
91101 GTCCACAGCA ATGAGGGACA GGCATTGAGA GGCTCCCCCG CCCTCCTGGT  
91151 GGGGGAAATT CCTTCATTCA AACTTGTTTA TACTCTCTAG GAGGAACTCC  
91201 CTGCCCTTATT GCTCTCTGAA GCCCAGCTAT GCCTTTTGAG AGGTCTTTTC  
91251 CTCTGAGGCA CAGTTTTGAC AATCAACTTC CTATAGGCGC AAATTCAGA  
91301 GGCTAACGAT TGGTTTTAGCG GCACAGGTTT TTGCTTTTGT TTTAAGATCT  
91351 AGCCTTCAGG ACCTATGTTG TTTCTAGGTG AAATCCAGAA AGTCATATGC  
91401 AACAAGACA TTTTGGATGA AGGAAAATTG CCATTGTTAT TTAGAAACAC  
91451 TCTTAATCTA ATTATATGAC ATGCTAGGTT TACACTTGCA AATCTGCAAA  
91501 TATATTGGTG TTAGCTATTA AAAGTATTC AAGATGCCAT GACACCAGTG  
91551 GGTCTGGGCG TTAGAAGCCT TTTCTGGCAC TCTAGGCCAG GTTAGGTCAG  
91601 CTTAATCCAC AGACTCACAG CGTCCAACAA AGGAAGCTGG GTGGCCTGAC  
91651 ACCATTAGT ATACGGGCAA AAAGTGTTAG CAACCTGAAC AACACCAGAG  
91701 GGCGTTGCTG TAGTGGATCC AAGAAGACCA ATGTCAGGTT TCATTGTGTT  
91751 CAGCAGATTG TTAACCTGGG AAAAAGTGTC ACGCATTGTA GGAGGATCTA  
91801 TTGTACACCA ATTAATAATTG AGAAAGTCTG GGCCACTTCA AGAAGTACAT  
91851 TTTGGAAAAT GCTCTCTGAT ACCCGGTATT GGATTCATGA GACATTAGTG  
91901 TGTATATTGA AGGAACTCC TAATTTTCTT GTTTCATGAC ATGGCTAAAT  
91951 GAATGATCTG TCTGCTGCAT TGAAAAACAC TATGGCTACA TTGGAAGGTG  
92001 CATTAAATGGT ATTTATTGTG TTAGCTTGTG AGGAATCCAG GAACTTGGTT  
92051 TATTGAACAA CATTGTTTAT TGATCCACAT AATATTATGT GACTGAGGAA  
92101 TGGTGGCTCC ATCTGCCTAA TGAAGAACGT TTGATATGCG ATGGTTTTTG  
92151 CCCTTTTTTG TGTGTGTGCT TACACCGGAA TCTTTGAGTT TGAGCAAATG  
92201 GCTCTTAGCC CTTGGATTCT GTTGCCCTGA TTCCATTCAC TTACTCACCC  
92251 ATGTCCTCAT TGTCATATCC CCAGTGGTTC CCTTCCCCAT GCTTTGTCCC  
92301 CAGGCCCTAG GTGAACAATC ACCTTGCTA GACTAAGAAA TCCAGTGCTT  
92351 GGCCACAATT ATTAGTTCAA AGATGGACAT ATGATCTGGA TTAGGGGCTT  
92401 TTGCCGGAGC TTTGGAGGAA ATGACCTCTC TTTCTTACTA AAGGTAAGTC  
92451 TGGAAGAGAG CAGGCCTAAG GCACTGCCAG TCATTTTTTT CCCCTTGGGT  
92501 TGTTCTGCCT AGAATTCATC AAACACTAAA GAAGCAGAGT GAAGAAAAGG  
92551 AGTGGTGAAT GGGGTCTTGT TTACATCATT TGAGCTCTGG ATGGTGCTAC  
92601 CCAGGAAGTG TTAAGAAATA AATGTTAAAC CCCCTTCTAT TTAAGGGGT  
92651 CAATATATTT TCTTTCGTTG TTTAAGCGAG TGTGCGTTGA GCTTCTATT  
92701 ACCTGCAAGT GAGAACATCC CAATACATGC TTTGGGTGAG AGCTCATGCA  
92751 GGGCCAGTGA ATATCCTCTG ACCTCCACAG CTAGTGACTG AGCCTGCTGG  
92801 CTGCTGCAGC TGCCATCTGT CATCATCTTT GAGCCACTGA CTCTTGATTT  
92851 AAAGTCTTAG GCAGAGCCAT CCTATTGTG CATGTGCACA CATCCTGGCT  
92901 GCCTAGGAGC TGTTTCCTCT GTGGTGGGAG GCAGGACACT GTGTCATACC  
92951 AATTATGCAC AGGAAGGGGG GCTTCCCAA AAATCAGAAG GAAGGTGGAT

FIGURE 3EE



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

93001 GCTGAACAGG AAACACTGTC AAAACAAATG TGCATCAAAA CAAAAAGTAA  
93051 AATGCAAAGT CCACCTTCAGT ATCATTGTAC AGTGTTAACA CTAGAGATAG  
93101 GGTCTTTGTT CTATTTAATT TAGAAAACAC AATTTTCTCT CTCACCTTTT  
93151 CTTTCTTTTA ATTGAAAAAT AATGTATTGT AAGTTGAGCA CCATTTAGCT  
93201 GGCTAAATTT TAACCTCCAGA GTGGAGGATC TTTATAGAGT CATACAGTTA  
93251 GAGAATTCCA AAGAAGCCCT TAATACAATG TAAGTAAGAA TAATGAGGTG  
93301 CAGAAATAAT TGTTTTTCCA GTTACTTAGT GGTAATTC A TTTGTTGCAT  
93351 GTGGTCGCAA GGTTTATAAG AAAACTCAGA GCCCAGCAAT TCTTCCAGTT  
93401 CTTCTGAGC AATTTTCCAC TAGTTAGGAG TCAGGAAAGA GGAACCGTGA  
93451 GAGCTGAGGA GCTGTGTATT TCATTAATTG TGAAATACAC AAATATTGGC  
93501 CTGTTTCCTT GCGATCATAA AATTTGCAAC GTAATATTGC AGACATTTTT  
93551 GCATATTACT AAAGTTCTTT GAAAAGTGTA TTCTTTGATG GTTTCTATTG  
93601 GATCCACTAT TCACACTATA ATCACATATT CCTGGGAACT TAAGCTGTTT  
93651 CTATTTTAGT AATAGTGTA CACCATGGTG TTAACGTTGT GAAGTGTGGT  
93701 CTTCTCTCT GTTGTGTGCC TTGGAAAGGT TACCAAGGGT TTGCTCTGTC  
93751 AAAGGAAATG AAAGGCTTGC CAAATTTCTT TCCAGAAAGG CTCTCATGAG  
93801 CAGCTTAAGG TTATGTACTT TTCAGACATA AAAAATGTGT TTATTAGGTA  
93851 GAATGTGTAT AGACACACTT TGTGAATAAT AGAATCTTT CTGAAAAGCA  
93901 GCGCTACTCC TTAGTATCAG AGATCCCTTT TATCTGAGGA TATCAAAGCA  
93951 CTTCTTTTTG AAGAAGGTTT TTCTTGTGCT GAGATATATG GAAAGATTTA  
94001 CAAGTGATATA GCAAACGGAA TACCTTCAGG CACTTCTCCA GACCAGTAGC  
94051 CACGCCAGAA GGAAGAGCAG ACTCTGCTCT GTCAATGACA GGGCTGCACT  
94101 GCACCCTAGT CCCTTTCTCA GTAACATAAT CAACGTGAGA AAGTCCCACC  
94151 TGCCTTTGAT TATTGGCTCA GCTGGTGGGT CCCCCGTAAC TAGCTTTTCT  
94201 AAGCTGGATG AATGATGCTC ACTTCTATGT GCAGATGCTT TTTCACAAGC  
94251 TGTCATTTGT AGAAGGACAG CGAGCGATCA GGTTCTTACC AATATCTGTG  
94301 AAATGCGATT AGATTTTAGT CTGTGAGGCA TTTTCAGATT GAGCCACCTG  
94351 ACTCTGCCCA CATCAGAGAG AGAGCCTCTG GTCAGGACCA GGTGGTAGCC  
94401 AGTCACTGTG TCACTAGCCT GGCAGCCTCA TTTAAGGGTT GTCCCTATCA  
94451 AACTATCGAG GCACCTGTTG GTACTTACCC AGCACTGGAT TGGATGTTTA  
94501 TTTTTTATTT TTATTTTAT TTTTATTCAG AGAAGGGGTA TTGCTTTGTT  
94551 GCCTGGGCTG GAGTGCAGTG GTGTGATCAT AGCTTACTGT AACCTCAAAC  
94601 TCCTAGCTCA AATGGTCCTC GCGCCTCAGC CAACCAAGTA GCTGGAACCTA  
94651 TAGTTGTGCA CCACCATGCC GGGCTAATTA AAAAATTTTT TTTTTGTAG  
94701 AGACAAGGGC TCACAATATT GTTCAGGCTG GTCTCAAATT CCTGGCCTCA  
94751 AGTGATCCTC CCACCTTGGC CTCCCAAAGT GCTGAGATTA TGAGTGTGAG  
94801 CCCCACCTGA TTTAGATGGG ATGTTTAAAC TGTGCCTTTG AAAAGAGCAA  
94851 TCACCGTGCC TAACATTAC TGAGTTCTTA CTAGTTAACG TGCATTGTGC  
94901 TCCACATACA TTATCTCATT TAATCCTGCA TAACCACATG AGGTGGGTAC  
94951 TGTTATTAGC CTCATTTTAT CTATGAGAAG ACTGAGGCC AGAGAAGTTA  
95001 AATAACTTGC CCGGTATTTC ATAGTTAGTA AGCAGTGGAG TCCAGCTAGA  
95051 TTCACCAGGA CCAGCTACAT AATTTGTGGC ACCCAGTACA AATTGAAGTG  
95101 GGGTCCCTTA GAGCATTAAC CCAAGCACAG GACCCATCTA AGCGTGGGCC  
95151 CTGTGGGACT GCACAGGGTG CACATCCATA AAGCAGCCCT GCCTGCGCAG  
95201 ACAGACTGGT GACCATAATA AGAAAGCACA CTCTCAACTA AACAAGTAGG  
95251 GCTGCACAAC ACACAGTTGG GCCAAGATTT GACTTTGGCA CGTAAACAGC  
95301 AAATGGAAGC CTTTGTGTGC ACTCCTCAGG CACAAGTCCT CTTTAAATGC  
95351 CAGCTTTCTC TTCCTGAAAA ACGGGGAAC CTTTTCTAGC CAGAGGTGAA  
95401 CAGATCTGAG CTCATCTGG TGCTGTGCGT TCATTACAGC CTCCCTTGG  
95451 CTGTTTGGCC TTGTGGAGTT GGTTGTCTTC TGCTGAAAGT CACCACCTGA  
95501 TGCTGTGGGT GCTATGGGAG AACAGTGAAG TTTCTGGAGG GAAGATAGGA  
95551 ATCAACCGCC TGTTTTCTCC TGGGACTGAG TTTTCTGGGA GACATATTGC  
95601 TCAGAAACAA TTCCTTCCCA CAGTAAAGCA CAAGGCAAAC GGGGTGCTTA  
95651 GTTTGCATCA TATTTACAG GTATTTAATC TTCACATGTA ACTCTTGCTT  
95701 TGCATGTAAC TTTAATAGCT ATGGGTAGGC ACTTTAATAG  
95751 CCTTGTCTTT TGATGAAGAA AGTGAGGGAG AGAGATTAAG AATGTGCCCTA  
95801 TGACCTGAGA GTTGGTAAAT AGAAGAATCA GAACAGAAAT CTGTGTAGTC  
95851 TCTAGTTCTA GAGCCTACAG ACAACTGTCA CACCTTACTT CAAAGTTCTA  
95901 CCCAAGCATT CTAGAAGGAT GAGCAGGGCA GTCAGAGAGG CGGGGTGTAA  
95951 CTAGATCCCC AAATCCAGAA ATGTGGTCTT CCCATTGCCT CAGAGCAAAG

FIGURE 3FF



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

96001	CTCCAAAGTG	TAAGTGCTGG	AATTTTCCCA	GAGTGACAGT	GTTGAGGGTC
96051	AAACAGTCTC	TCCTTATAGT	TCACCAAAGG	CATGGAGCAC	AAATACACTC
96101	ACACACACGC	CCATGCATGA	GATACAGCAT	CACTCAAGAA	TGATGACTTT
96151	CTGTCCACTG	GGCAGTGTGT	CACCAAAGAA	AGATGGCTGT	GAATATATTT
96201	AAAGGCTTGT	TTGAGTATTG	CATCACTCAT	GCTCTTACCC	AAGAACTTAG
96251	CTTTAATATT	ATTTTTGTGT	TCTAGTCAAC	AAAACACTGA	ACAAATAAGG
96301	AACCAATTGT	GATAATAATA	ATAATAATAC	TTTGCAATTG	TACAGTACTT
96351	TACAGTCCAT	TGATTTTTTC	CCCCCTGCAT	TTTCCTTGAG	TACCTCTGAC
96401	ACTAGGATTT	GCAGATGTTA	AGTGGGTCTA	AGGAGAACTA	GGTAGTGTGA
96451	GGTGGAATTT	GATCCAGATC	TTTCATCTCC	TCACTTCTCC	CTGATGCTCC
96501	ATGGTAAGCC	ACAGTGCCTT	ACCCAGGAGG	TGGGTGGGGG	TGGTCATCTC
96551	TGAAAGCTGG	AGGAAGGGGG	TGTAGCACTT	GTCAGGATTA	ATGAGATGCC
96601	TGTTTCATCCA	GTTCCAAGCC	TCCACTTGTT	TGCCTATGTC	TGCAATATAT
96651	TTCTTTCTGA	GACACTTGGA	CAACCTATAT	TCCCCAAAGT	TAGGCTATTG
96701	TGAGAGTCAT	AAGCTGGGGT	CTTCAGTGT	TTCACAAGTT	ACTTGAATGT
96751	TTCCAAGAGT	CACCATAAAC	CTGCATAAAG	TGAAACTGTA	GAGGCTCATT
96801	TATTTCCTTT	TCAATAGGGC	TAGCTTAATG	TCAGCTCGAC	CATTCTAGAG
96851	GGGTATTCTT	GGAAAAATGA	TTTTGTCCAA	GTTCCCTGAAA	GTACCTGAAA
96901	AAAGTTCTGA	GAGCTTTTTT	GCATATTTAA	ATCAAAATCC	TGGTGAGTAA
96951	AGGAAATACA	AGATGAGGAA	GCCTAGCCTG	AACACTCATT	TTAGAAATGG
97001	AAGCTGTAAT	TTAGATTATT	ATAAGAGGTT	TGAATGATTG	AGAACAGAAG
97051	ATTGCAAAAG	AAAGTATCCA	GGTGACTCAT	TCCCGAAGGC	AGAAGGCAAC
97101	CGTGAGTTCT	GCAGGCCCTG	GGGTGGCTGA	ATGATGGACT	AACCATCAAC
97151	GTTTTTTTAT	CATGTTGCAT	TCCCAACCTG	TCAATAACCA	TGGACCCAAT
97201	AACTCACTCA	TTGAATAGAT	TCAGAAACAG	GCCCCACATG	ATTTACCCAG
97251	ATTTGGGAGA	ATGGTTAGAT	TACTGTCTAG	ATACTTTTTA	ACATAAGATT
97301	GTAATATCAA	TTGGCACAAA	AATGAATATT	AATTAATTTA	GACTTTCATC
97351	TCCATATAAA	GTGTGCTAAT	GCTATAGGAG	TTTTTCTTCC	AGCAATACTT
97401	TCTTTAGCCT	CATCCATATA	GGGTAAGCCC	AGTACTCATT	GTACATAAAT
97451	TACTTATGTA	ATGGCAGTAC	TCTTAAGATT	GCAGATGCGG	GTATTTTCAA
97501	AGCACTATTT	GAAATACATA	TTAGTAGACC	TGACTATAAA	AAGATTCTCT
97551	TGTATTCAAA	CATCCATCAA	TAAACTTTTA	GCATCTTATT	ACCCTCAATG
97601	CAAGAGGTAG	TTGGGTGGAG	AGGTAGGACT	CAGAGATGAT	GTGGAGTTCC
97651	CAGTAAAGAG	AAAAAAGAA	CCAGATGGGG	CGAAACTTCA	CTGGCGGTGG
97701	GGAGAGACAG	CACAAAGCCT	TCCCTTCCCT	ATTCTTTCCCT	GTTTTTAGAC
97751	TTCCCAGGGT	AAGGCTGTAC	AATTCATGAG	TCCTTTCTAA	CCTTGTTACTA
97801	GACCACATTT	CCTCTTTAAT	ATGGGGTACC	CATTACCCCT	CAAGACAGCC
97851	ACAGTCGGTC	CAGGTGGAGC	CCATGGGTAA	GACTGTGAAA	AAGAAGCTCT
97901	TGTCAAATCT	AATAAGTGCA	GTGGTGATTC	CTTCCCACGC	ATTCAGGTCT
97951	CGCTAAACTA	GACATGCCCA	TGATGCTTGG	TGTTTCAGAA	AAAGGTGGTA
98001	TCACTTTTTG	TCAGAAATGA	AAATGAAAGT	TCTGAGTGAC	CATGAATTTT
98051	CTAAAATGTG	TTAATATCCA	AGAAACCTTA	AAACCGTTTA	TAAGGGGAGA
98101	AGGAAGAGAA	GCAATGGAAC	AATGTTGCGA	ATTGTAGAGG	GCCTTTGAAA
98151	TGAAGTTCTA	CTCCCTAAAG	CTCATAAGGT	GGGGGAATGT	ACAAACTTTT
98201	AAAAAAGTCT	GTGAGTTCTT	TGGTCAGTAT	GCTAATTTCT	CTGCCACTCT
98251	CCCTCTTTTT	CATATTTCTC	ACCAGGGTAT	GGGAATATTG	CTCCGAGCAC
98301	TGAAGGAGGC	AAAATCTTTT	GTATTTTATA	TGCCATCTTT	GGAATTCCAC
98351	TCTTTGGTTT	CTTATTGGCT	GGAATTGGAG	ACCAACTTGG	AACCATCTTT
98401	GGGAAAAGCA	TTGCAAGAGT	GGAGAAGGTG	TTTCGAGTGA	GTACTGTGTC
98451	ATATTTTAAAT	TCTAACCACT	GCGATCCAAT	TGGCTTTAGC	CTGACAGGAT
98501	CCAGGAGGCA	GTATCAGGGG	CATTGTCTGC	TTTTTAATGGA	ATAATTTTAA
98551	TGTTATGATT	GTATTTTCTT	GTTTTGGCCA	ATGGAAGTCA	AACATCTTGC
98601	ACCTAAACTC	CCTTCTTTGA	GTAGCTTCCT	ATTTTAGAGT	GATATTTCTG
98651	CAATCACAAAC	ACAAGAGGGT	TAAGTATGGA	TTTGCCAACA	CAGATTTTTT
98701	GAAGAGGTGA	GACAAGTTCA	GTTTCTCCCT	CAAGATGGAA	GATGGGGTTC
98751	CTCATTGTGT	TTGTAATGAT	GTAGAAAAC	GTAAATCCAT	CCATTTTGTT
98801	GTTGGAATC	CCTTACTCCG	TTTTATTTTC	AAGCACAGTG	TCTTCAGGCT
98851	AATCCTGCTT	CTTCCAGAAG	CCTGACTTCT	CCAGACACTG	CTCTGTGCTT
98901	TGCACCTGTC	TCCTAATGGT	CTCTCTCTCT	CCCATCTCTC	ACTGCTGAGT
98951	GCTCCCTCAG	AAATGGCATC	CTGATGTACT	ACTTCTTACT	GAAGTGTGTA

FIGURE 3GG



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Inventors: GUEGLER et al.  
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99001 TGATTGCTAT TGCCTTAGTG GGTTTTTTCC TTTCTGGAAT ATTTATCTTT  
99051 AAACAAGAGA CAACTATCTC AACTCAAGGA ATTTATTTAC TAAAATTAAA  
99101 ATTAATTAAT AAATTATTCC TGGCATTAGT TGCAGGCATG AGTGGCTGAG  
99151 TGATTAAACC GGGGTTCCTA ATGCCCTTTA ACTCGCACTC ATTTGTATGC  
99201 TTTACAGAA CACCTGTTTT GCTCAGATGT AAGGTCACTT CTGCCCTCTT  
99251 ACTCACGCT GACCTAATTC TCAAGTCTTT CAAACCTTCC TCAGGGAATG  
99301 CTTTCTTATG ATGACTTAAT ATTTACAAAT GACATTCTGA GGTCTTTTCC  
99351 AGGATCTAGG AATGGTGGCC AAAGGCAGAT CAGCTGGAAG CTCTAAAGCT  
99401 GTGCTTTTTT CCCCCTCTAA GAACCTTAA ACTTTGAGTT CAAGGCTGTC  
99451 TCTGCAATAA TGGCTCATAC TTCTCTTTAG AAGAATGCAA GGGAGCTTTC  
99501 AGATGAGCAG TTTTCAGAGG TTTTTAAAAA GAGTAGAATG GGAGGAACGA  
99551 GGCACCATAG CTGGGTGAGC CATTTTTATA TCTCACTGAT CCTGGGTCAG  
99601 CTGCCTCAGT TTAATCATCC ACAAAGGGG ATAGAAATTTG AATCTACTTT  
99651 GTCAGGTTTT GGTGATGATT AAATGAAATG ATGTGTGGAA AAGAGCTTGT  
99701 CATATAGGGC AGACATATAG AGCCGAGGCT TTCTGTGTTT CTCTCCAAGA  
99751 GAAGCCCTCA TGGGTCAGGCT AGCCACTCAT CCGGGTTTCA TCTGAGGAGC  
99801 TCTGTGGTGT GTGAGTTTTA CTGGAATGTC CCACAGCCTT TGCTCCTTCA  
99851 TGCTGGCTGG CCGGTGGCCT CATTAGACTG TGCACCTGGG CTCCCCAGTA  
99901 GTCTCCATGG AAACCATCAG TGCTCAGCTT CCCTGCTTTT CAGATGTTTA  
99951 GTTCTTCCCTA AACCAGACAT AGCAGCCCTG TCTCCAAGAA CTCTTTTGAA  
100001 CTTCTTGGA GACCCCTTTT AGCTGCTGCC TCATGGCCCT CTGACTTAGA  
100051 GAAAAAAGAA TCTGGTAGTT TGAACACTCA GAACAGGATT CAATTGGGGA  
100101 AATGACTGAT CTGGCATTTT TATTTTATG TAGCTTCTTT AGAGCTCAGT  
100151 TTCCTTATTT GTAGAAGAAA GGATTGGACT AAAAGTTTTT GAAATCCTCC  
100201 TTAGCAGAAA AAATTCTAGT TACTATATTT GAAGTGATGG AAGAGGTTGC  
100251 AATCATCTGG ACATCTGCTA CTAAATTTAG GGACTTAGTC TCCCCAATG  
100301 AATTTCCGAC TACAAATAGA GTATATGGTT CTCCTTCCCC TTGAAGCTGC  
100351 GTCTCAAATG GACCATCAAC AGATTCTGAT ACAGAGCCTT AGAAACCTTT  
100401 ATGCTGATTG TCCACTCAGC TCCTTGACAG GCCATCAAAG ATCAAGATTC  
100451 TTTTAGGAAG GCGAGACAGT TGCATATTAT TGAATTGGCA GTGCACAATG  
100501 AATGCATTG CTGAGTATTG GAGGGTGCTA TTGGAAGGG TGACCGAATT  
100551 CCAGGGGAAA TGTAAGCACA CTTCCCTAAAT ATACGAACAA CTGATCCTGC  
100601 AGCAGTTTGC TTGCTGCATG TAAAGTTTTG GTAGAAAATC TCAGTTTTCT  
100651 GCCATTGATT TAACTACAT TTAAGTCC AATTACGTTT AGGTGGTTAT  
100701 TTGAGAAATG AAAATTGTAT AAGCTAACAA AGCTTGGGGT TGTGAATTTT  
100751 TAGTTCTCAT GGGGGAAGGT TTATGTATTT CTTCTGCTCA ATGAGTGTTA  
100801 AGCCCTTCTC TTGATCTGTT ATGTTTTCTC TCAGCTCTTG GGAAGAGAGG  
100851 ATTTACGGTG GAGTAAAAAT AAAATCTAAA GTTGGCTTTC TGCCGGGCAT  
100901 GGTGGCTCAC ACCTGTAATC CTAGCAGTTT GGGAGGCTGA GGTGGGTGGA  
100951 TCACCTGAGG TCAGAAGTTC AAGACCATCC TGGCCAAGAT GGTGAAACCC  
101001 TGTCAGTACT AAAAAACAA AAATTGCGAG GGCACGGTGG TGCATGCCCTG  
101051 TAATCCAGC TACTTGGGAG GCGGAGCAT TAGAATTGCT TGAACCCAGG  
101101 AGGTGGAGGT TGCAGTGAGT TGAGATCGTG CCACTGCACT CCAACCTGGG  
101151 TGACAGGGTG AGCCCTGTG TTAATCAATC AATCAATAAA TAAAGTAAAT  
101201 ATAAAGTTGG TCTTCAAGAT GCCTGAATCC TGAGGTGACC CTGTTTGGG  
101251 TCCTTCCAAC ACATCCCAGG TCTGATCCTC ATTTTAAAGA ATTGCTGAGG  
101301 GATATTGGAT TACTTAGAAA TGCTTTTGGT TGCAGAATAA TAAATGCCT  
101351 GACTATTGGA GTTTTTATGA CATGAATAAA TAAGAATTCT TCTCCTCTGG  
101401 AGTTCAGAAC TAACTGTGAA ATGGAGGAGT CAGATGGAGA TCAAATTGCC  
101451 AGCTTTTATTG CTTATAAGCT GATCAGAGAA TATAGCTTTA GCTTTGTTTC  
101501 CGAAAGGGCT TACAGTCACT TTACCCTGAA TTAGGACCTT GCTGCTGCAT  
101551 TAGTTTTTCT ATTGCTGTGT AACATATGAC TACAATCATA GAAGCTTAAA  
101601 ACAACACTTT TAAATGGCCT TCTTGACCA CCACTTAAAA TGTTTAATTT  
101651 TGCTCTCAGA TGATGTTTCA AAACAAAGGA AAGGTAAAAG TAAAGGTGCC  
101701 AAATTATTG CAGATGTGCA TAACCAAACC CAAATGAAAC TAAATAAGA  
101751 ATGCTCACAA TTTTCTTTTT TTTTTTTTTT AAGTGGAGAT GGGATTTTAC  
101801 TGTGTTGGCA AGGCTAGTCT GGAACCTCTG GCCTCAGGTG ATCTGCCCTC  
101851 CTTGGCTTCC CAGAGTGCTG GGATTACAGG CGTGAGCCAC CACGCCCAGC  
101901 CACACACATT TTTTAAAGCC GGGTGTACAG ACCAAATAAC ATATTAAACT  
101951 AGATGTAAG AAAGAACCA AAGTGAATTC ACCAGAAAAG ACATGCCACT

FIGURE 3HH



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

102001 AAGACAGAAT GTAAATCTCTG TAGAAACCAG AGTACTCAAT GCAGAAGGAT  
102051 ACTTTTCTAC CAGAAAGTGC TTGCCAACAA ACAAACAAAC AAAAACGCCT  
102101 TTTACAGACC CAAGAGGGAT GCAAAGTTCT TTACTTAAGG CACCTTTTAG  
102151 CCAAATCAA TCACATATAA AGTCAAAAAG AACTCGCCAA AGGGAGGGAG  
102201 TCTGAGAATC TGAGAGGAGA GTCACCCAGA CAGAAGAGGC AACAGACAGA  
102251 AGCAGAGAGC AGAAAGGGCT CAGTCAGTAC TGCCTCAGT TCCAGGGACC  
102301 TCTCATTCTT CTGAGGTGCA CTCACTTTGA TCCCACTTCT GACACCATT  
102351 ATGTACCCCT AAATAACATA CAGACAGAGG CTCATTGAAA GAAAATGATA  
102401 TTTACTCAGG GATGGGCATT GCAGTGGTAA CATACATGCC AGTTTAAACT  
102451 ATGTGTGCAT TCAGGGAGGT AAAGCAAAAA AAAAAAAAAA AGGTTTTTAA  
102501 AGGAAAAATG AACAGGATTA CATAATTGTT TTGAGCTAAT TATCCTTGAA  
102551 TACAAGGATC AATAACAAGG GTGATGCCAG TCCAAGGTTG GACAGTCAGT  
102601 TGCTGGGTAG ATGCTCTCGC AGAAATGCTT TTCTGCATAA CGAGGTGATG  
102651 GGTTTTGTGC AAGTTGTAG TTTTGTGAGT CTTTATGAT AGCTCTTGTA  
102701 ATCAGGCATT TGTGCATGAG AATCCTTCTT TCCTGGCTTT CCCTGACTCT  
102751 GTTTGTGAGA GTTTTAAAGCA CAAGTAACCC CATTTTGATT CTGACAATTT  
102801 TCATGCTCCC AACACTCATT AACAATGGGT TAAGAATTTG AACCTTATC  
102851 TCACATAGCA AGAAGCCTGG AGGTACGTTG ACTCAGGCTT GTGCTATCAG  
102901 CTCCACAATG TCAGGTGTAT CCAGATTGT TACCTCTTTC TGCTCTGTTT  
102951 TCCTTGGCAT GGTAGCTCTT CATCCTCAGA CTTGTCACTC ACATTGCAAG  
103001 ATGGCTGCTT CATGACCAA TAGCAGTTT TCACCCAACC TCATATCAGG  
103051 AAATACAAAA GGAACCTCCCT TAAAAATTAT CTTTTTTTAG AGCAGTTGCA  
103101 TATTCACAGC AAAATGGAGG GGAAGATACA GAGATATCCC ATATCCCCTT  
103151 GCCCCTACAC ACATGTGCAG TCTCCCTCAT TATCAACATC CCGCACCAGA  
103201 CTGGTACATT TGTTACAATT TATGAACCTA CATTGATGCA TCATTATCAC  
103251 CTAGAGTCCA TAGTTTACAT TAGGGTTCAC TCTTGGTGTT GTAGAGTCTA  
103301 TGAATTTTGA CAAATTTATA ATGACATGCG TCTACCATTA TAGTATCATA  
103351 CATAGTATTT CACTCTCCTA AAAATCCTCT GTACCTGCTT TGTTCATCAA  
103401 TCCCGTTCTC CTAACCTTTG ACAATGACTC ATGTTTTTAT TAGTTTTGTC  
103451 TTTTCCAGAA TGTCATTAAT ATGGTTTGGC TGTGTCCCA CCCAAATCTC  
103501 AACTTATATC TCCCAGAATT CCCATGTGTT GTGGGAGGGA CCCAGGGGGA  
103551 GGTAAGTCAA TCATGGGGGC CAGTCTTCC TGTGCTATTC TCATGATAGT  
103601 GAATAAGCCT CACGAGATTT GATAGGCTTA TCAGGGGTTT CTGCTTTTGC  
103651 TTCTTCTCTA TTTTCTCTT GCTGCCACCA TGTAAGAAAT ACCTTTCACC  
103701 TCCCACCATG ACTCTGAGGC CTCCCAGCC ATGTGGAAC GTAAAGTCCAA  
103751 TTAAGCCTCT TTTTGTTCCT AGTTTCAGAT ATGTCTTTAT CAGCAGCGTG  
103801 AAAACGGACT TATACAGTTG TGTAAGTTGA ATCATACTGT ATGTAGCCTT  
103851 TTCAGACTGG CTTATTTCAC TTAAATATGG ATAAAGTTT CCTCTATGTC  
103901 TTTTCATGGC TTGTAGTCCA TTTCTGCTGG GTGGTGAATA ATATTCCATT  
103951 TTCTGGGTGT ACCATAGTTT ATGTATCCAT TCACCTACTG AAGGACATCT  
104001 TGTTTGTCTC TAATTACGAA TAAAGCTGAT ATAAACCTCT  
104051 GTGCACAGGT TTTTGTGTTG AACATTAGTT TTCAACTCCT TTAGTTAAAT  
104101 ACAAAGATGT GTGATGACTG GATTGGATGG TAAGAATATG CTTAGGTGTA  
104151 TAAGAAATG CCACACTGTC TTCCAAAGTG GCTATACAAT TTTGTACTTC  
104201 CACCAGCAAT GAATGACAGT TCCTGTTGCT CCACATCCTC ATCAGCATTT  
104251 GCTGTTGTCG GTGTTCTGAA TTTTCTCAAT TCTAAGTGTG TAGTGGTATC  
104301 TTGCTTTAAT TTGCATTCT CTGATGATGT ATAATGTGGA GCATCTTTTC  
104351 AGATGCTTAC TTGCCATCTG TATATCTTCT TTGGTGAAGT GTCTGTAAAA  
104401 GTCTTTGGCC TATTTTAA TTAGCTATT TGTTCCTTTA TTGTTGAGAT  
104451 TTAATGTATA ATGTGTAATG TATTATTATT ATTATTATTA TTATTATTGA  
104501 GACAGAGTCT CACTCTGTCA CCCAGGCTGG AGTGCAGTGG TATGATCTTG  
104551 GCTCACTGCA ACCTCTGCTT CCCAGGTTCA AGTGATTCTT CTGCCTCAGC  
104601 CTCCCAAGTA GCTGGGATTA CAGGCATGCA CCACCATGCC TGGCTAATTT  
104651 TTGTATTTT AGTAGAGATG GGGTTTCACT TTGTTGGCCA AGCTGGTCTT  
104701 GAACTCCTGA CCTCAGGTGA TCCACCTGCC TCGGTCTCCC AGAGTGCTGG  
104751 GATTACAGGC ATGAGCCACT GTGCCTGGCC ATATTTTATA TATTTTGAAT  
104801 TATATTCCTT TATCAAGTAT ATCCTTTGCA TTTTATCTT AGTATATCCT  
104851 TTGCAAATAT TTTCTCCCAA TCTGTGGGTT ATCTTTTCAT TCTCTTGATA  
104901 GTGCTTTTAA CAGAGCAGAG GTTTTAAATT TAATGAAGTC CAGCTTATCA  
104951 ACTATTTCTT TCATGGAGCA TGTGTTGTG GTATCTAAAA AGTAATTGGC

FIGURE 3II



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

105001 ATACTCAAGG TCATGTAGAT TTCTTCTAT GTTACCTTCT AGGAGTTTAA  
105051 TACTTTTGCA TTTTACATGT AGGTATGTGA TCACTTTTAA GTTGATTTTT  
105101 GTGAAGGGTG TGAGCTTGT GTCTGCAGCC ATATTTTTTG CATGTGTATG  
105151 TTCAGTTGTT CCTGTGCCAT TTGTTGAAAA GACCTTTTTT TTTTCTCC  
105201 ATGTTGTCGC CTTTGTCTCT TTGTCAAAGG TAAGTTGACT ATATTTATGT  
105251 GGTTCATTTT TGGGCTCTCT ATTCTAGTTC ATTGACCTAT TTGTCTATTC  
105301 TTTCTCCAAT ATCATACTGT CTTGATTACT TTCGCTCTAT AGTAATTTTT  
105351 TTTTTTTTTT TTTTTTTTTT TTTTTTTTTT TTTTTTTTTT TTGAGACGGA  
105401 GTCTCGCTCT GTCGCCCAGG CTGGAGTGCA GTGGCAGCAT CTCGGCTCAC  
105451 TGCAAGCTCC GCCTCCCGGG TTCACGCCAT TCTCTGCCT CAGCCTCCCA  
105501 AGTAGCTGGG ACTACAGGCG CCCGCCACTA CGCCCGGCTA ATTTTTTGTA  
105551 TTTTGTAGTAG AGACGGGGTT TCACCGTTTT AGCCGGGATG GTCTCGATCT  
105601 TCTGACCTCG TGATCCGCCG GCCTCGGCC CTCAAAGTGC TGGGATTACA  
105651 GCGGTGAGCC ACCGCGCCCG GCCACGCTCT ATAGTAATTC TAAAGCCAG  
105701 TTAGTTCTAG TCCTCCAATT TTTTCTTCT TTTTCAATAT TGTGTGACA  
105751 TCAGCTCCTT TTATGGAAGA AAAATCTTTC CCAGAAGTTA CCCTGTAGAT  
105801 TTCCCTTCT GTCTCATTGA CCAGAATGAG ATCACATTAG CATCTGCAAG  
105851 GGAGGATAGG AAAGGAAGTA TCGGACAAAG GACGATAGTA TTGCCATAAT  
105901 GGACCAGTGA TTCTCAAAGT TTGGTCCCTC AACCTTAGGC ATCAGTATCC  
105951 CTTGGACCAT CGGCATCGGC ATCCACTGGA AACTTGTTAG AAATGAAAAT  
106001 TATTTGTGGT GTGGTGGGG GCGGTGGGGC TGGAGCTCAG CAATCTGTGT  
106051 TTACCAAGCT GTCCAAGTGA TTCCAATGCT TAAGGAGCAG AGGAATCATG  
106101 TTTTCTCTCT TGGGGCTGAA CACATTGCTG TGATGAACAA AATTAGAATT  
106151 CTGTTAGCGA AGAAGTTGGA GTAAGCAAAT GATAACGTCT CACATAGATG  
106201 TCAATTAACT GCTAGCCACT GAGATCACTC ATAGAGAAGA TGTCTTCACT  
106251 CTTCTTGTC ATAAATTAGG TGGCTGTTGG GATCCTTGAA TCAATCAAGA  
106301 TAAGCTAGCC TATCACAAC AGCCTACTCC CACTCCTGCC AGATCTGCTG  
106351 CAACCCAGGC AGCTTCTCAG GCTCAGGGC TAGATAGGGT GGGGAAACA  
106401 GCTGAGCGCT GCTTGTGCTG TCTTCAGAGC GTTGTCCCTC AGGTAGAGCC  
106451 CATTTGCCCC AGCTAGTTAC CAGGTCCCAT TCGTAGCTGC AAAGGGGGTT  
106501 TGGAAATGCAT TCTTTTATCT CCAAGAATAG TAGTGGATGG TAAAATTGTT  
106551 GCGCACTGGT ATAGTCATGT TCATATGCTC TAAGATGCAC TCCTGGGTCC  
106601 CACTCTAGGG TGACCAGCCT TTCAGGAATT TAGTTCAGG TCGTTTGTGC  
106651 ATCACTCTTC GGGGGGAATA CTACTATTGT GAGACTCATA GATTTACAC  
106701 CTGAGAAAAT GGAGCCTGTG AGGTGACTTG CCTGGATCCA CACAGTGAAT  
106751 TGGTGGTAGG ACCTGGATTA GAACCACTAA TCCTGCCTTA ACCTCTTCCA  
106801 GATGGGCTGA AAATATTAAT GTCAGATTAA TCTACACCAT GAAACCAATG  
106851 TGGAGTTTAG AATATTTAG TATACCATAC TAATTAAAGT AAAATAATT  
106901 CTTCTGAGT TCCCAGGGAA ATATCTGGGC AGTTAGCATC CCAAATATCT  
106951 GCTTATTTGG GATGAAGGAG GGCTGACATT GGATTCTGAA GCAGGTTTGG  
107001 GAAGCAGCG CCCTCTTCT CCCCTGCTGT GGGGTAGCTG TCTTGCTGGG  
107051 CCAGGCTGAT TATCACTTGA TAGGATGCTG TAGGAAAACC AGTCAAATTC  
107101 TGGACTGATT CTCATTTTCT TGGCTCCAAG CTGGACTTTG GCCTCTGGTA  
107151 GGAAGTACCT GCTTCTTTTT TTCCGGCTCG GATCAGCAGG CTTTCTGGTA  
107201 TTTCTGTAA AACCAAGGGA CACCTTTTTT TTTTTTCTT TTTCTTTTTT  
107251 TGGCTTTCCC CCCGCCCAA GGATATGGCA GAAATGTTTA TTTGCTTATG  
107301 GATCCAAATG ATTCTGGGTG TCACTGACAA ATAATAAAC ATTACCCTAG  
107351 ACTTACGAGT GCCAAAATTA CTTGGAAAAT TTAGAACAGG CCACATGTTT  
107401 AAGATGGAAG TGATGACAAT CTCAAAGTGC TAATACGGTT AAATTAGTGG  
107451 ACTGATCAAC CACTTTAGAT TCCAGGAAGG GGCATGTGGC GGAAGCCAAA  
107501 GACTCTGCA GGCCTCTGCC ATGTGCCTGG CATGGATCAA GGAGAGGCTT  
107551 TTAAGAACAC AATTGGCAGG AAGCTTCTGT TTCTCCCAAG GCATCTTTGA  
107601 GCTAGCATTC AGCAGCAAAA GGGTTAACTT AAAATAATTA CTATTTCAAG  
107651 AGGCAGGCGC AGTGGTCCAC ATCTGTAATC ACAGCTCTTT GGGAGGCCAA  
107701 GACAGAAGGA TTACTTGAGC CCGGGAGTTC AAGACCAGCC TGGGCAACAT  
107751 AGTGAGACCC CATCTCTGAA AAAAAAAGA AAATCGAGCC CGGGCGTGGT  
107801 GGCTCATGCC TGTAATCCCA GCACTTTGGG AGGCAGAGGC AGGCAGATCA  
107851 CTTGAGGTCA GCAGTTTGAG ACCAGCTGG CCAACATGAT GAAACCCTGT  
107901 TCCTACTAAA AATACAAAAA TTAGCCTGGC ATGGTGGTGT GTGCTTATAG  
107951 TTCTAGTAC TCGGGAGGCT GAGGCAGGAG AATCACTTGA ACCGGGGAGG

FIGURE 3JJ



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Inventors: GUEGLER et al.  
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108001 CAGAGGTTGC AGTGAGCTGA GATTGTGTCA CTGCACTCCA GCCTGGGTGA  
108051 CAGAGTGAAA CTCTGTCTCA AAAAAAAAAA GATTCAAATT ACTTGGGTGA  
108101 GGTGGTAAGT GCCTATAGTC CTAGACACTC AGGAGGCTGA GGAATGAGGA  
108151 TTGCTTGAGT CTAGGAGGTT GACACTGCAG TAAGCTAGGA TCACATCACT  
108201 GTACTCTAGT TTGGGCAACA GAATGAGGCC CTGTCTCTAA AAAATATTTTT  
108251 AAGTAAAATA AAAAAATAAA AATTATTATT TCAACAGAT CAAAAATACC  
108301 TGTTTTTGAA ACTGGGTATT ATTTTCAGCA TTGTAGGTTT AGCTACAGTT  
108351 TCCAATACCT ATTGTAATG AAAAGTTCAA GGGTCTTGGC TGTGCACATC  
108401 AGCATTGCAC CCAAAGAGGC AGGGGAGGAG GGCAGAGTGG TAGGCTGTGG  
108451 CTTTAGTTTA AGAAATGGCT GCCTTTCAGT AGTGTAGAAA AGACACAATA  
108501 TCAGTGAAC TCACTTTACC AGTGCCCAT TGTCTCTGGA GTATCTGCTT  
108551 CTATGTCATG CCTGCCCTAG TACATACCAT ATTATAAGTT CCTAACAACT  
108601 AACTCAGTAG GATTAATGTT ACATAATAAT GTGAGTTTAT TTATTTATTT  
108651 ATTGAGACGG AGTCTCACTC TGTGCCCCAG GCTGGAGGGC AGTAGCATGA  
108701 TCTCGCTCA CTGCAACCTC CGCCTCTTGG GTTCAAGCGA CTCTCCTGCC  
108751 TCAGCCTCCT GAGTAGCTGC GGCTACAGGC GCGTGCCACC ATGCCTGGCT  
108801 AATTTTTGTA TATTTTTAGT AGAGACGAGG TTTCACCATA TTGGCCAGGC  
108851 TGGTCTCGAA CTCCTTACCT CGTGATCTGC CCACCTTGGC CTCCCAAACCT  
108901 GCCGGGATTA CAGGCATGAG CCACCACGCC CTGCCGTGAG TTTATTTTTTA  
108951 TCAGAGAGAA GGCCCTGGTT TTAATGTAAA CAATTGCTTT CTTCCTTTTC  
109001 CTAGGCGGCA AGAAGGTAGG AAGTAATTAT TTGAAAATGC AAATAATTTT  
109051 AAAGCTTTAT CAATCAAGTC TGTTCCAAAT TAGTTTAAGG ATTTTCTGTA  
109101 GCTTTAATGA TAGGGCCAGA ATGTACATTT GGGGTGACCT ACATATATGA  
109151 CATCCACAAA ACAGACTACA CAACATTTCT TAATGACAGT CCATGACAGT  
109201 TTTTCCATGG ACGGCTCCTT CTTTCTCTCC TTCATTTAAC ATAGGATTGC  
109251 TCAGCCTCGA TACTATTGAC ATTTTGGTCT GGATAATTCT TTGTCATAGG  
109301 AGTTGTCCTG TGAATTGTGA GATGTGTAGC AGCATCCCTG GGCCTCTACT  
109351 CGCTTGATGC CAGCATCATC ACTGCCCGCA GTTATGACAG CCAAATGTCT  
109401 TCCAGACATT ACTAAATGTG TCCTCAGGGG CAAAATCGCC CTAGTTAATT  
109451 TGACCATAGC TATACTGGGA TATAAGGGGA CAATTGCCCC AAAGACTACC  
109501 AGGTGCATGC CCTGGTCCCC TGTCCAAATC TTCCACACGA GCTCTGGTGC  
109551 CTCCACCAAT GATCCTAATC AGTTTTCAG TGCTAGCGCC ATTCCGACTC  
109601 AGAATCTCC TCCTTCAGAT GGGTCCTTAA AGAGGGCTTT GCAGATTTTA  
109651 TACTCCGGGA ATGAGATCAT TTCTCACCAA GAAAGCAAAA ATGCCTGGAG  
109701 ACTTGACTCT GATGAGTACA CATAATGACA AATTGTTCTG CTATTATTCT  
109751 TCACTAGGCA AACCATCTCA GCACTAACTT TAACTGACCC ATAGGGACTT  
109801 ATCTAATGTA TGGTTCTTCT TTCTTGGCTT ACCTTTCATA ACTGGCCAGT  
109851 ATCCCTTTGG TGTTCCTGT TGTCTTCTGA GGTCATTATA GAACGTTTTA  
109901 ATGGCCTTTA AAGTGCATCT TCACTCTTTT CTATGCACAG TAAAGATATC  
109951 AAACATTGCC TAAAAAGAA CTACTTAAAA TACTGCCTGG ATAGCGTTTA  
110001 TCATTTAAAC TAAATCCAGG TAGCTTTAAC AGAGTCTCTC TCTGTCTCTC  
110051 TGTCTCTCTC TCTCTCTTTT CCCCCCGGCA AGCTTTGATC ACAGGTAACCT  
110101 TCTGGGAATC TGATTGTTAC TTTGGGGTGG GAAGTTATTC ATGAACATCT  
110151 GCATGCCAGA ACCTTTGTAG GGAGCCTTGG ATCGGTCATT TGTCTGAGAG  
110201 GATTTTGTTG AGATAATACT GAGTATTATG GCACTGTGAT ACCAAAGCCT  
110251 AGATATAAGT CACTGATATG GTTTGGCTGT GTCCCCACAC AAATCTCATC  
110301 TGAATGTAG TTCCCATAACT CCTCATGTGT TGTGGGAGGG ACCCAGTGGG  
110351 AGGTAATTGA ATCATGGGGG AGATTATTCC CATGCTGCTC TTGTGATAGT  
110401 GAGTTCTCAT GAGACCTGAT GGTTTTATAA GGGGCTTTAA CCCCTTTGCT  
110451 TGACACTCGT TCTCTCTCCT GCCATCCTGT GAATAGGTGC CTTCCACCAT  
110501 GATTGTAAGT TTCCTGAGGC TTCCTCGGCC ATGCGGAACCT GTGAGTCAAT  
110551 TAAACCCCTT TTCTTTATAA ATTACCCAGT CTCGAGTATT TCTTCATAGC  
110601 AGTGTGAGAA TGGACTAATA GAGTCGCTAA TCTGTTTTGA GGGTTTATTA  
110651 TGCCAGATAC TGGGCTATCT GGGCTTTACC TAGAGTAAGC TGTACAGTAA  
110701 GTAACCCCTG CAAAGAGATC ATTATTGTTT CTTAATTATA TGAGTTTGGA  
110751 ATGCTTAGAC TGGTCTGTG ACTTGTCCAA GGTACACACAG CCCATAAATG  
110801 ACAGAACTAG ACTTCCAAAC TTGGTCTCCC TGCCCCAGAG TGCATGAATA  
110851 GACTTAGTCA TTCCACTATA TGCCCTTTCT TCTTCTCTT GCAATGTAGG  
110901 CATAGCATCT GATGGCTCAG AGGAGCCTTC ACAAAGGTT TAGTAAGACC  
110951 TGGGGACAGA TAAAAATGGC TAGTTGAGAG AAAGATATTG GGCCTGTCTT

FIGURE 3KK



Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

111001 CATCTGCTTT AAAAGGATTT TAGTTTTCTG ACTTCATGCT CTCTCTCAGT  
111051 GTGTTGAATT GCATCATAGC CTCTGGTTCT TTATGTATCT GCTTTAGTTC  
111101 CCTAATACCA GCTCATTATT AGTTAATATC TCTTCTTTTG TGTCTCTTTT  
111151 TCTTGGAGGT TAATCTAAGA TTTAGGTGTC CCCTTGCTCA TGTCTGCTGC  
111201 TATGTGACTA ATACAAAGAT GGGTTTATAT TCTGGTATCA CTATAGGACA  
111251 TTAAGGTAA TGTCAAAAAC CACAATTACT TTTGTACCAA CCTAATAAAA  
111301 GAGGGGCTTT TACTGTACCA ATAGCTGACT TGTTTTGACC CACCTCTGCG  
111351 AGAGCAGTTG CCAGGCAAAG ATAGTCCCA CTCTGTTCTT CCATCCACTG  
111401 CTCTACTTTG TACAACCTGC TTAATGTTAA AAACAGGAGG AAATGCACAG  
111451 CTCAAAGCCA AGCCTCTTGG TGCCCTGAGA TAGCTGGCCT TGTCTCCAA  
111501 AGCATTCTTC TTTTCTGCG CTCATCAGAA TGCCTCAATG CTCTGCTTCG  
111551 ATGGTTTAA GAGCATAGAG TGGCTTGGTG TGGTGAATCA AGCCTGTAAT  
111601 CCCAGCACTT TGGGAGGCTG AGGTGGGCGG ATCACCCTGAG GTCAGGAGTT  
111651 CAAGACCAGC CTGATCAACA TGGAGAAACC CCATCTCTAC TAAAAATACA  
111701 AAATTAGCCA GGTGTGGTGG TGCATGCTG TAATCCAGC TACTTGGGAG  
111751 GCTGAGGCAG GAGAATCACT TGAACCTGGG AGGCGGAGGT TGCAGTGAGC  
111801 CAAGATCACA CCACTGCACT CCAGCCTGGG CAACACGAGT GAAACTCTGT  
111851 CTCAGTAATA ATAATAATA TAATAATAAT AATAATAATA ATAATAATA  
111901 AGTAAATATA AAAGAGCATA GAGTTTGAGA CCATCACCAC CAAGATTTTA  
111951 ATTCCCACTG GGGATTTAAC TCAGTCTTAA ACTCAAGGTC TGCTATGTCA  
112001 AGTAGTATTA AATATCTCTT CCTTTAAGA GCCATTAGC TCTTCTCTCA  
112051 TATCTTTTCAG ATTTTGCTGG TTTTCCCTAA GGCTTCTGAA ACTCTTAAAA  
112101 CATCTCTGAT AGAGGAAACT ATCTAGAAAA TTTTATGGGT ATTCAATTATC  
112151 AGTGAGGTCT TTCTCATTTA AGAGATAATC ACTTCTTAGA ATCCCAGGGG  
112201 TTTTCATTAAG TATTAATAAA AGGTTTATATA TTTTTCATT TTGGGGCTAG  
112251 TGAAAGTCTA GTGATGCTTT AGGTCTACAA CATGGTAAAC TGTATTTAAA  
112301 GATTCAGGT GCTTTTGAGT TATGAATTTA ATGCAAGAAT TCTATTAGCA  
112351 ATCAGATTTT TACTAGTATT ATAAAAATCAG CATAATAGGT GAATGATTTC  
112401 CTATGTTTAT CTATTTATCAC CAATTTTATCAC AGGTAGTATT GGTTCCTCTG  
112451 GAATGCACTG ATTTAATAAA ATATTAATTC TTTGCTCTCT TCTTATAGAG  
112501 AACTTTTTTAA AAAATTATCG TAATTTTTTT TTTCTTTTTA CATTTAGCCT  
112551 CATGTTACTT CTGTGAGCCA AGCAAGCAAT GACCTACTTT GGTGTAGCTT  
112601 CTAACAAATT AGGTTCCTGA AAATTGAGAG GTGCCCTTAT TGAATTGAGT  
112651 GTGCTCATCA CGGAGCTGGG TGTGTGATCT ATGTGTTTAC TGTAGGATAA  
112701 GTTTTAGATG ACTGGCATGT CAGTAGTCAT TGATACTTTC TAGATAGCTT  
112751 TATGACTTTT TGCCTTAGGG AAGGGAAAAAT GTTTAGAATA CACATCATTA  
112801 TTGAAAGGTG TGCCAGTGT CTGAACCATC ACACCCCAA GAGCCAGCTC  
112851 CCCTGGGAGG TGACAGTGTG ACAAGCATGT GCAGCCCAT GCTGAGCAGG  
112901 CTCTGATGGC TTTGCATAGT GAAGGGCTGC CAACAACTG CACTCTCCTG  
112951 AACTGAATCC AGCCAGGAA ATGTGCATTC CTGTTAGAAG TGCACCTTGT  
113001 ATTTCTGGGG GAGAAATGCAT TGCTTTGTAT TTTCTGAGAG GAGCTGCATT  
113051 TGTGCATCAT AAGATTTTAC CTAATGGTTT TGCACATATG CTTGGAAGTT  
113101 TACTGCTGAG TTTTAGGCTC CTGCTCATAG ATAGCTGTAG TTCTCATCCT  
113151 ATAGGTGGTG GACCCCTAGG AGCCTGAGGT GTCGTTTTAA AGGATCAGTG  
113201 AATCCTTTTG TGTTCAGC ATTGCCAGTG GACAGAATAA ACAATATGTC  
113251 TCCTTAACAT GTGTGCTGCC CTTTTCCAAA TGTGTGTAGA GGGGTTGTCA  
113301 TCAATGATTC ATTTCACTTC ATTTTAAAGG GTGACTCCCG AATTCATAGT  
113351 ATCTATAGTA TCTTTTTTTT TTCTTTTTTT GAGATGGAGT TTTGCTCTTG  
113401 TTGCCCAGGC TGGAGTGCAA TGGTGCGATC TTGGCTCACC GCAACCTCTG  
113451 CCTCCCGGGT TCAAGTGATT CTTCTGCCTC AGCCTCCTGT ATCGCTGGGA  
113501 CTACAGGCAT GTGTCACCAT GCCAGCTAA TTCTGTATTT TTAGTAGTGA  
113551 TGGGGTTTCT CCATGTTGGT CAGGCTGGTC TTGAACCTCT GACCTCAAGT  
113601 GATCTGCCCG CCTTGGCCTC CCAAAGTGTG GGGATTATAG GCATAAGCCA  
113651 CCATGCCCGG CCTCTCTCTT TCTCTCTCTC TCTCTCTCGA TATATATATA  
113701 TATATATATA TTCTCACTAT CAGTTAGTAC CAAAAGTTCT ATTGTTGTGT  
113751 GGGGATCAAG GATATTTTAA ACCTTCAGAA GGGAGTGCCA TACTCAAAAG  
113801 TTGAGATCAC TGGTCTTTCA AGTTAGCATC AATTTCCATG ACATTCTGGG  
113851 CTTTCTTTT TCTGTGGATT TAACATTTTC ATCCTGGCCA TAGTCATTGT  
113901 TACAAAGATT TTTTTTTTTT TTTTGTGAGA TGAAGTCTAG CTCTGTTGCC  
113951 AGGCTTGACT GCAATGGCAC AGATCTCGGC TCACTGCAAC CTCTGCCTCT

FIGURE 3LL





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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

114001 CAGGTTCAAG CAATTCTCCT GCCTCAGCCT CCCAAGTAGC TGGGATTACA  
114051 GGCACCTGCC ACTGCCCTGG CTAATTTTGT TATTTTGTAGT AGAGACGGGG  
114101 TTTCACCATT TTGTCCAGGC TGGTCTCAAA CTTCTGGACC TCATGATCCA  
114151 CCTGCCCTCGG CCTCCCAAAG CACTGGGATT ACAGCCGTGA GCCACCGCGC  
114201 CTGGCCAGAA GTTTTCTTTT CCTCTAAGTT ACTCCAGGA GTTGGTAGGA  
114251 TACTTTAGAG CCTGCTTCAA GATTTTCTTT ATGCCTTTT TTAATTGTGT  
114301 TAAAGTGTGC ACAACATAAA ATTTACCATC CTGTTTTTAA GTGTACAGTT  
114351 CAGTGGCATT AAGTACATTC ACATTGTGTG GCAACCATCA CTACCATCAT  
114401 CTCCAGAACT TTTCCATCTT CCCAAATGAC AACTCTGAGT CTGTTCAATA  
114451 ATAAGTCTC ATTTCTCTC CCCCAGCTCC CTGGTGACCA CCATTCTACT  
114501 TTCTGTGTCT ATGAATTCA CCACTCCGGG AACCTCATGT CAATGGAGTC  
114551 ATATAGTGTG TGTCTTTTGT TGTCTGGCCT ATTTCACTTA GCACAGTGTG  
114601 TTTAAGGCTT CATGAATATT GCACATGTGT CAGAAATTC TCCCTTTCAA  
114651 GGCTGAGTAA TATCCCTCTG TCTGTATATA CCACATTTG CCTATTTGTT  
114701 TATCTGTGTA TGGACTTTTG GGCTGTTTCC ACTTTTGGT TGTATGAAT  
114751 AATGCTGCTA TGAACATGGG TGTATAAACA TCTATTCAAG TCCCTGTTTT  
114801 TAATTATTTT GGACATATAC CCAGCAGTGG AATTGCTGAG TCACATATAA  
114851 TTACAGATTT AATTTTCTG AGGAACCGTG AACTGTTTT CTACAGTGGC  
114901 TGCACCATTT CACATTCCCA CCAACAATGC CCAGGATTC TGTCTTTCCA  
114951 CTTCTCACC AACACTTGCT TTTTCTGTG TTTTTTTTTT TTTCTTTTAA  
115001 CTTTTATAGG CCCAAATGAC AGCGTTTGGT AAATTGCTGT CTGACTGCCT  
115051 CTAAGTCTCG GCTGCTCCCA TAGCTGCTGT TCTATCACTC TGGGGACTAA  
115101 GTGGAGAGGC TGTGCCGTTA GCCTTGCTTC CCTCTGCAC CTTCCCTGTC  
115151 TCCCTCCCTG CCCTAACCTA CAGCTGTGTC CCTGTGAGTC TTTCTTCTCT  
115201 ACTCGTCAGC TTGGGCCTG TGCGCAGAGC TGGTGGGAGG ACGGGTGGCT  
115251 CAGTGCCAGG CCGACTAGGG CCTCTGCATA CGGATGACAT CCAGTTTCCA  
115301 CCAGACCTTT TTTCTACTCT GAAATCCTTT TATTCACCCA ATCATGATTC  
115351 ACTTTTCTGT TCTTCACTGT GGCTGTTCTT TCATGCTCCT CGTAGGTCA  
115401 ACTTGATAAA CAATTATCGA ATAACACTTT TTTGTGTGTG TTCTCAACAC  
115451 TATAGGGATA TGTGGCAATA AACAAGGGAT AGTCCTTTCT CTTAAGGAGA  
115501 AAACAGCCAT GCATCAAGAC CAGTGTCCAT AATATTGTGC AGAATGATAC  
115551 CAGGGCTAGG GCAGGCAGGC TCTGAAGTCA CACCACCTTG GGTGAATGAT  
115601 CCATGCTATG TCTACTTCTT ATCAGCTATG TGACCTCAGG CTGTGCCTCA  
115651 GTTTTCTTAT TTGAAAAAAT GAGGATAATA ATGGTTCTGT TCTGTTTTGG  
115701 CACTTAGTGT ACACCTGAGA GCAGTGTCTG CCACATAGCC TCAATCAATG  
115751 CTATTCACCTA TTATTGTAGA ACACTGTTAG CTATGGGAGC CCAGAGAGGG  
115801 ACTTGTTAAG TCTAGCTTGT ATATTTTACA TCACACAAGC ACCTGCCTTG  
115851 TCTTGCCAAT GGATTGTCT GCTCAAGTAA AGCATAGGGG CTTAAAGCTA  
115901 AATGTTACTG TGCCTTTATT GGCCTGTATC CCTGTAGGAC CTGCTCAGTG  
115951 CTAAGTGCTT TGGAGGTGTT CAGTAAATAT TTATTGATTG TGAATTGATT  
116001 AGAGAGGAGA GAGACAGGAA CCAGGTCTTT TTCCAAGCAG CCAGGATGTG  
116051 TAAGCTTCAC AAATGAAGAG ATGCTTGCTG ATGCTGCCCT CTGCTCTACC  
116101 CTTCTTGGA ATGGGCATGG AGGTGGGTGG GGCTGGAGAA GTGGAGGGGG  
116151 CCACAGAAAG GGTAGCGACA GAGAGAAAGA AACCCATGGG CAACAGGGTC  
116201 TGTATCTGGG ACGGGACCTC AGCCATCAAG CATGGCCTTG GGAGGAGAAG  
116251 ATGCACTGGC CGCGATGCAG CGAGCCCTTT CGAAAGGCAA ACAGCACAAG  
116301 CAAGAGTGCA GACGGCAGGT TCGTCGGCTC CTCTGGGGCT CCCCAGGGG  
116351 ATGCCGTTGC CATTCGGTCT GCGTGAAGGA GGCAGGTGTG CTTCTTCGTC  
116401 GTCGGCCACA CTTCACTGGC TGCAAGTGTT CACGCAGATG TGCTCATGTG  
116451 ATCTTACCAC ATACGCAGAT TCTAGTAAAA AAAGAAGAAA AAATCCAAGA  
116501 ATGAGTGAGA ATTTATTTTA GCTACATGCT GACTGCCTCT CAGCTTGCCC  
116551 GTGCTCTTAC CAGATCTTGA AAACAAGGGC CAGTTTGTAT TTTTATAAAA  
116601 ATGCATCAAA GTGTTACTAA AAGATCCTAA AGGAAGACTA AAGTTTCCTC  
116651 CGAAAAGAAG CCTGGCCCTT CAAATACCAA CAAGGGATCC TCGGAAGATG  
116701 GGTTTTACTG AGCTCAAACA CTGTCTCTTC TGTTTAGATA CTGTATTATT  
116751 ACATCATTTT CCCTCTCAGA TTGAGTGATG TTTCTCCAT TATTTGTTCC  
116801 GTTCCTTGGC AGAAGTGAAT TTCACCATGA ACAACATCTG CAGTCTTTCT  
116851 ATACGAGCCT GGGGAATGCT TGAAAGAACT GATACTAAAT TATTATTATT  
116901 AATATTTGTT TGTCTACCTA TCCACTCCCC ACCCCCAGGT CCCCTCTCAC  
116951 TCCCAGTAG TCACAAATGG GTGTATCGGG CATCTCGTCT CAGTTGTCAG

FIGURE 3MM



Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

117001 GACTGTCCCT TCTCATTCTA AACTATTTTG CAGATTAGCT TGAGCAATTA  
117051 GAATCAGGAA TAGATATCAT GTGGTTAAAA TAAAAGGGAA TTTATCTACA  
117101 ATTTGAAAAT AGATTACAGA GAACTTCCAT GTGATTTTTT TAAAAAATA  
117151 AATTTTGCTG TGTACTATAA CAGAGTTGGC ACCAGAGCTA ACAAAAAA  
117201 AGCAAGTATC AACATTTAAA ATGCAGTACA TGACATGTAA ATGCCATATG  
117251 GTATTCTTGC AATGTTATTA CCACCTTCTT TCTGGCATCC TTTTCCTGAC  
117301 ATTGCTGTAT GCTTCTTGAC TCTGCTGCTC TTCAGAAAGC CTCAATTGTC  
117351 CTGAGCCCTT TAATCTGTA TTTATATTAG GTGTCTCTCT CTTTATCTA  
117401 CCCTTTGGAG GCTTATCAAC CTTTTCCCA AGGAAGAGGA AGAAGAGGAC  
117451 CTGTACAGAT GGCTGTATAA ATATGTGACA CCTGCTTCCG TGAGCCACTA  
117501 TTGGAAGAGT TTAAGAGTTG ATGGTATTGT CCCCTGTCTA GAAGATGAGC  
117551 ACACATTGTC TTCTCTTCTC CTTTCTATTT TTAATAAATG ATCATGTGCC  
117601 TTTAATGATG TTTCTAGAAA TGTCTTGAAT TCAAATTATT TTCTATTTTT  
117651 AGGGAATAA AAAAGGAACC CACCAACCA ATTTTCTGAA AAGATTATAT  
117701 GGGTCAAAAT GTTAAAAGTT TGTCAAGTT AATATTCCCT AAAGTAAGAG  
117751 CCTTGGTGAT CGTGTTTGGG GAGAAATCTC TGCTTCACCA CGGGAATGTC  
117801 AGTGGATCTC TGCGTTTGCA CTGAATGTGC CACATTCTTT CATCTCCAGA  
117851 CTTTTGCGTG TGATATTAT GGTGTTTCAA ACAATGTCTG TACCTCCTC  
117901 CTGGTCTCAG CTCAAATGTC AGTTCCTTGG GGAGCTTTTC CTGACTTCTA  
117951 AATGAAGGTC AACACCCCG CAAATAACAT CTGTAGACC CCAAGAATAA  
118001 CATTCACTC ACTGTATTGA TGGTGGGCAT CCCCATCAGC CTATGAGTTG  
118051 TGTGAGGTCG GGTCCCATCT GCCTGTTTAC CACTGCATCT TCAGGTGCTA  
118101 GCACATGGCC TGGAAACCCAG AGAGCACTTA ATCCATACTT GATGAATCAA  
118151 TGAATGAACA TTGCTAGACA TAACCTTATA CATCTGATA TAGAAATGA  
118201 CCTTGAAGCT GGACTIONGTC CCAGTTACTT GAGAGGCTGA GGCTGGAGGA  
118251 TCAGCCAGC TTGGGCAGCA TAGTGAGACA TCCCCTATCC CTCCTACTCT  
118301 CCTAATCCTG CACAATCCCC CTCTAAAAA AGATAAACAG AGTGACCTTG  
118351 GGCTGGCGCT GTGGCTCGCG CCTGTAATCC CAGCACTTTG GGAGGCTGAG  
118401 GCGGGCGGAT CATGAGGTCA GGAGATCGAG ACCATCCTGG CTAACATGGT  
118451 GAAACCCCGT CTCCTCTAAA AAATACAAGA AAATTAGCCG GCGCGGATGG  
118501 CGGGCCCTG TAGTCCCAGC TGCTCGGGAG GCTGAGGCAG GAGAATGGCG  
118551 TGAACCTGGG AGGCGGAGCT TGCACTGAGC CGAAATTGCA CCACTGCACT  
118601 CCGGCCCTGGG CGACAAAGTG AGAATCTGTC TCAGAAAAA AAAAAACAA  
118651 AAAAGAGAGT GACCTTGAAA TCGAACTAG TATTGTATGC AAATAAATGG  
118701 CAATGGGGAA AAAAAATTCT TAGGCTTTGA AGTCCAATTA TTTTGAATAA  
118751 AAGATGGGTC TGTAGGGAGC TGCTCCCTGC TAATGCTTAT TGCCAATGGT  
118801 ATTCATATGC AGACACTTTT ACCTCATCAG GCTATACTTA GAAGTGTAAT  
118851 TCTACAGACT TATCAAGTCA ATCTTCTTAA ATACAGTATA CAATTACCT  
118901 TCACCCAGTG GTTCTGAACC CTGTAATATC CAATATTCTT TTATAGCATA  
118951 TATTTATGAA TACTCCTTTA CTACATTGAA ATGAATTTCA GAGACAGTGC  
119001 ACTTTGCCAA TACAGATAAT TCTGAAAAA TCAATGCAAA TTTTCTAGCT  
119051 ATAATATAAA GGAGAAATAA ATGGAAAGTA ATGTTTCAAT AATAGTGCT  
119101 CTGTTATGAA ACCCTAGGAG ACCTGCTGAA GCAGTGAGTC TTGGCATCTA  
119151 TACGTAGAAT GCAATATCTC CAAATGCAGA TTGGTTCAGG TATGTTGTGT  
119201 TGATGACTAA GATGTCACAA AGGACTTTTT CTCCAGTGGT GTGGTTTTCC  
119251 AAAATAGAGA ACAACTCTCA GCAAGGTTCC AGCTAATCTA TTTACATTAG  
119301 AGTCAGATTC TTAATAAATT TGGTCAACTT TGAAGAGATG CAAACAATTT  
119351 GTGTGTGTGT CTTACATGTT AAAAGGGAGT TAGGTTCTTG GCTCAGATAA  
119401 TTGTAGACAT GAGTTTTTCT CAGTGGGACA TTCAAAGCTC ATGCTAAATG  
119451 TGGGATGGTT CTGTGATTTG TGGCACTGAT TGTGTATTG CAGGACATCT  
119501 GAACGTCTTT GACCTCCTCC CAGTACATGC CAAACGTGCC CCTCCAGTTG  
119551 TGACAACCGC AAACACCTTA ACAAGTTTAG AGACCACCTC CTAGGGTGTT  
119601 GTAATCTAAA CAGGGTTATA AACAGAGCTT CCAGGGGGCT CCCATGTAAC  
119651 TTTCAAGAA TACATATTT AATTTCTATT CTCGTGAAAA TGGCCATGTT  
119701 CCAATAGTTA AGCCTCTTCC CTTGATGTAT TTCCCATGCC ATTAATATTC  
119751 AGTTCATTC CACAAATATT TATTATATGC ATATGTGTGT GTACATCCAT  
119801 CTGACTATAC CTTTCTATGT TATGTACCTT TACTAGAATT CCAAATATA  
119851 AAATCCTGTC AGTTTATCTC TTGCTAGATG AATGGTTTAA TTGTTTTGT  
119901 AGAATATTTG CTTTAAACAG TACTCTCATA TTTTCTTGAG GTGCTAAAA  
119951 AGAGGAGGCA GCTGTAGAAA AATGCACTAC GGGCCAGGCG TGGTGGCTTA

FIGURE 3NN



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

120001 TGCCTATAAT CCCAGTACTT TGTGAGGCCA ATGTGGGCGG ATCATGAGGT  
120051 CAAGAGATTG AGACCATCCT GGCCAACATA GTGAACTCC ATCTTACTAA  
120101 AAATACAAAA ATTAGCTGGG CATGGTGGTG CATGCCTGTA GTCCCAGCTA  
120151 CTCGGGAGGC TGAGGCAGAA GAATCACTTG AACCCGGGAG GCAGAGGTTG  
120201 CAGTGAGCCG AGGTCACGCC ATTGCACTCC AGCCTGGGTG ACAGAGTAAG  
120251 ACTCCATCTC AAAAAAAAAA AAAAAAAAAA GAAAAAGAAA GAAAAAGAAA  
120301 ATGCACTGTG CCAGGCACTT AGAACATTGA GATGAAGGAG CACACTGTGT  
120351 ATGAGGGAGA CACATGGATG GATGGACAGA CAGTGATGCA GGTTGAGCAG  
120401 TTCTATGGAC AGGGGACCAT GCAAGGGTGA AGGAACATGG ACAGCAGAGA  
120451 GCAAGAACTG GAGAGGGCTT CCTGCAAGAG GTAATGTCAG AATTGTGTGT  
120501 GAGGAATGAA CAGGAGTCCG ACAAGCATTA AAAAGGGCGA AGAACCTTAT  
120551 CCTAGCAGAT GGAACAGCCC TTAAAAGGGC ACAGAAGCTA AAAAGAAAATG  
120601 AGCTATGAAG CCATGAGAAG ATGTAGAGGA ATGCTAAATG CATATTGCTG  
120651 CGTGGAAGAA GCCAATCTGA AAAGGCTACA TGCAGTATGA TTCCAACCTAC  
120701 ATGACATTCT AAAAAAGTCT AAACATATGA GACAGTTACA AAGATCCATG  
120751 ATTGCCAAGA GCCTGGGGGA AGAGAGGGAT GAATCGGTGG AGCAGAGAGG  
120801 ATTTTTAGGC TAGGGAAACT ATTGTGTATG ATACTATAAT GGTGGATACA  
120851 TGTCATCAGA CGTTTGTCCA AACCCATAGG ATGTACAGCA CCAACAGTGA  
120901 ACCCTAATGT ATACTATGGA TTCTGGATGA TATTGTCAGT ATAGGCTCAT  
120951 CACTTGTAAC CAGTGCACTA CTCTGGCATG GGATGTTGAT AGTGGGGAAG  
121001 GCTGTGCATG TTTGGGGCGG GGGCTATATG GGAGATCTCT GTACCTTTCT  
121051 CTTAATTTTG CTGTGAAGCA AAAATGGTTC TAAAAAATC AAATCTTGAA  
121101 AAAGGCACTG AAGTATAAAA TGGAGCAGTA TTGGGGCACC AATAAACCAT  
121151 CCAGTCTCTC CAGAACTGCA AACTAACTGC TACTACAGCA AGAGAGAGGG  
121201 GTCAGCAACT ACCTGCCTGC AGCGGGGGTA GGGGGGAGTT GGGGGAAATG  
121251 GCGGGGGGTG GGGGTCCCTG ACAGTTTCTT CAGAAGTGGG TTGACGTATT  
121301 CTGGAGGAGG AGGAGGAGGA GGCAGCATGA GGCAGCAGGC AGGATGCATT  
121351 TCTTGAACTG GATCATGGCC AGGTCCTTAC AGCTCTCCCA CTGCCACCTT  
121401 TGGCAAACAT TCCTGGGATC CTGAAGGCTC AGACAAGGCC CATCCCTCTT  
121451 ATGTTACCAT GGGGATTATC TCTTCTCTCT TTTCTCTTTT AGTTTTCCTT  
121501 CCAAGGAAGG GTTGTCACTC CTTTTCCAAA AGGAAGAAGG ACCAAGTGAA  
121551 TGATTTTCAA GGGCACAGTG CTGTTATTTT TCGAGGGAAC CTCTGCCATG  
121601 TTCTTGAGCA TGTGTCTCGT TTTCTCCTTC CCTTCTCTTC TTAGCCCTCT  
121651 CCCTCTCGCT CTCTCCTACC TCTCCCCCTT TTCCTTTTTC TTTTCATCACA  
121701 AAGACTACAA AGAGTATACA TGGTCACTGT AGAGGCCTTG GAAAATGCAG  
121751 GGGAGTGCAA AGAAGAAAGT AAAATCCTGT AAATATCCTT TGTCCAAAGA  
121801 AATCCACCAC TAACACGTTG ATAATCGTAC TTCTGAATCT TTTCTCTGCA  
121851 TCTACATTG GCCCCAATGC CTGGTGTCTC ACTGGCCCCA CAGTACCCCT  
121901 CCCACCTGCT ACCTACCTTG TCCAAGTTTC CCTGCCCCG GGTACTGGCA  
121951 GGGGTTGTCA CCGTGTCTTG GCCACAGCCT GTGCCCTTCC TGTGTTACTC  
122001 CATCAGCTCC TTCTGGATTG CTGACCTCTG CTCTAACCAC TGATCGTTCA  
122051 TGACAAATTT GCTACCCACC TTCTGCAGGT GACAGATCCT TCTGCCTCAG  
122101 AAGGGGGAGT GCTACTGTCC TGCTGTCTTA GAGCTGAGGG AGACGGACAC  
122151 CACTCTCCCC GGTAACACTA GATTCTCAGG AATAGATACA ACACCTTCCA  
122201 AACTGCAGCT GACACCAGCT GTACATTGTA ACAAGACTTT TAAGATTTAG  
122251 GAATGTCAGA GAGATATTAC CCACAGCAGT TACATCACAT CTGCTTACAG  
122301 TCTGGCTGTT CTTGGAGCCC AGAATTCCAG GCCTGTTCCA GGGTGTCCAA  
122351 TTGAGCTGTG TCCTTGACCT GCCTCGAGGC AGCTGAAGCC AGCTTGCCCT  
122401 GACCTCCAGG AGTAGCTGTT GCAGGCAGGC AGCTTAGCTC AAAATGAGAG  
122451 AACTATGGC TAATTTAAAC AAAAATGAAA ATAATTTTAA AAAGGATATT  
122501 GGATAGCTAC CAAATCCTTG GGATGGTTGG AAACCCAAAC TGGGAAGGTA  
122551 CCTTGTTAAA AACAATGACC AAATCACACC ATGGAAGTGG TCCCGAGGGA  
122601 AGCCACTGCT GTGTCTGCCC GGGCATATAC AGGGCGGTGG CCCCTGGATG  
122651 CTGCTGCAAG AACCATCCTT GTGACTGCTC CTGGAGTGGG GCATACCAAC  
122701 ATTGGTACCA CCATCCCTGG AATGGCTTCC ACAGGGTCCC TGTTCCTTTA  
122751 TATAACATCC AAGATATGTC TGCTCCTGCC TGCCACCCCA CCTCCCATGG  
122801 AAGCTCCCCG CTGATGCTTT CACTTCCATC TTGATCAAGG GCAAGGTTTA  
122851 CCTTCCATGC CCACCCACT CAGGGTTCCA GTCCCTCACC CTCTGTGCGA  
122901 GGACCTAGGA GGATCCAGGA CTCTTGAGAG CTGGGCTGTG CACAGGTGGT  
122951 GAATCACCAG CAGAAAGCTC TGCATCTAGT CTCTTCTCTT TGGCCTCCAG

FIGURE 300



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

123001 ACTGGACGTT TTGCTTCCCA CCACCCACCC CCCGCAACCG GAAGACTCTA  
123051 GGAAGATCTC GTCCCTCCCA CTGTACTTTT GCTCCAGGCT GAGTGGCCAT  
123101 TCCGCCTTCT CTCTGTCTGT GTTCCTAACC CGGTCTTGCC TACTGTCTGG  
123151 AAGAGGAGAA AGTGGTCTGT TAAGTCTGCC TCTGAGAATC TCCACACCTC  
123201 TTTTCAGAAT GGTCTGGGGA GTGGCGGGTG CCAGTGAGAC GAAAGAGGAG  
123251 GACGGAGGAC AGAGGACTCT TAGATGACTA CTTCAAGGTT TAACCCTGTT  
123301 ACATCTGCAT GGGTGTGGTT CAAAGTCTGA ATTATGTCTT TATGGCTGGG  
123351 AAAGCCTGGG TCACATGCTT GTCTCCTCAT AGCAGGAGAG GCTGGGAAAG  
123401 TCAGTAGGTG GTACATTGCA GCTTCTGTAC TGGGAGGAGG TCTCTGTCTT  
123451 TCACCAAACCT AAAGAAGGAT GTTCAAATTA TTGGTGGGCA AAAAGAATGA  
123501 CAAGGATCCT CTGACGTGGA CATGCCCTGT GATCACATTA GCTCTGTTTG  
123551 GTCACAGCAT GATAGTGGAG TGGCTTGGGC GACCTATGGC AGTATCATTG  
123601 ATAATCATTT ACCATACACC ACAGGCTGAG CGTCACCAGG GTTGATCCAA  
123651 TTCCATTTTC TAATCTTTCT CCTAACATGG GGTGAACATC AGGAGGCCCTG  
123701 GAGATCTTCT TTTGTTGCTT TTAGATTCTC AGTTTCTGGT CCTCTGAGAA  
123751 GAACTGTTCA AACTGTTTCT GCATATCTCT ACTAAACACT TTGCAGGAGC  
123801 AATGGAATCT AGAAGTGCAT TTTAAAGAGA ATACTCTTGT AAAGGAAATA  
123851 GTATCTACAG AGATGCAACC CTACCAAAGG GTGGGGCACT GTTGACTACT  
123901 TTATCTTATG GAGCATGTGT CCCTGGAGTC ACAGCCTTGG GATGCCTACA  
123951 TCTGCTTTCA TTTGCATAGC TAAACAGCCC AGTCTCTTCA TGAAAGGTAA  
124001 TAGTCTACTT TATTCATTAC ATTTAGCTCC ATGAAAGAGT TTGCATATAA  
124051 CTTAATTGTT TTAAGAGGAA AAAATGTACC AATTAAAAGC CAGGACATTT  
124101 ATTATGCATG TTCAGCAATC AAAATAGGCT TCAGTGTAGC CTTCTATTTT  
124151 TTTTTTTCTT TTTTGAGACG TAGTCTCACT CTGTTGCCCC GGATGGAGTG  
124201 CAGTTACATG ATCTCGCTC ACTGCAAGCT CTGCCTCCCG GGTTCAGCG  
124251 ATTCCCTGCT CTCAGCCTCC CAAGTAGCTG GGATTACAGG TACCTGCCAC  
124301 CACACCTGGC TGATTTTGTG GTTTTTAGTA GAGACAGGGT TTCACCATAT  
124351 TGGCCAGGCT GGTCTCGAAC TCCTGACCTC AAGTGATCCA CCTACCTCTC  
124401 GGCCTCCCAA AGTGTGGGGA TTACAGGCGT GAGCCACTGT GCCTGGCCCA  
124451 GTGTAGTCCT TCTAAGCAA TCCATTCTAA TCAAATGAAG GAACAGTGCT  
124501 CCTCTTTAAT AATCATAAAT AAGTGATAGA TGAATAAGGA AATGAATCAT  
124551 GTATGCATTT ATTTGTCCAC AACACACAAT TGGAGCTGGC ATTTCTTGGA  
124601 GGCATTTGTA TAAAACCTAG ATGAGATCAC GTCCCTTAGG ATGTCAAGGT  
124651 ACTTGCCCTG ATTCTGCCAT GAGGCCTCCA ATGAAACTT TGTCAGGAGT  
124701 AGAAAACAGC CAATGTATGT GAAGTCCAAG TTCATTGGCA CCTCCCTAGC  
124751 CTCCTTGCAG GGTGTGTTCT CTCCATCACT AATCCCTGT TTTGGATCAT  
124801 TTGCAACAAC TCCCTTTACT ACGAAGAGGG AATCTTGAGG TATGAGCAGT  
124851 AAATATGGAG ACTGTGGTAG GCAAACAGTT CCACAGTGTC ATGAGGTCCC  
124901 TTTTACACTC TCTCACTCTG TGGATTCTTT CCCCTTACA ACACGTCTGA  
124951 TTTATCACAA GCTGTGATTA ATTATTTCTT TGCATGACTG TTTAATGCTT  
125001 GTCTCAACTC CTACTAGCTC TGTGAGACTG GGGGCCATTT TGTTTACTC  
125051 ACCGGTGAAG TTAGCTCAAT ATCTGACAGA GAGTAGGTAC ATGATAAATA  
125101 CTCATTGAAA AAAGGAATAG AAAAGTTATA GAGTTCAGCT ATATTCATAG  
125151 CTTGAAAAAT ATGCTAAAGG AATTTTCTCA TTTGTAGGTG TTCCTGTCCA  
125201 GTTCCCTTAG TGCAGGCCTT CCCAGTGTAG GGTTTATTTT TGCATGACTT  
125251 TCTATAAAGC TGTATTTCTT TCTTATCTAA CTTCTCGTTC CTAGTCTAAC  
125301 TAGAAAGTTC ATGCATATCC CTTTCTCCCT TCTCTCCATT TTCTTTTAT  
125351 CTCTGAAACA ATTAGGTACA CACGTAGCTG GGAAGCCTTC TTGTATGCCT  
125401 CCAGAAAAAT TCTAGATCCC TCAAACCTATT GTTCTATCTC TTCTTTCTGT  
125451 ACCCCAATTT TTTTCTCAAT TATGCTCTTA AATTATCCTT CTGAAAGATT  
125501 TTCTAATTTT GTTTGCTTCT TGTGCTTTT TTCTCTTCTA GTTCACACAC  
125551 CTTTCTCTGT AAGATTTCTT AATGCTTATT TTATTATTAT TTATAGTTTT  
125601 ATGTGGACAA GCATCCCTAG ATGCTTACAT TAAAGTATT TGTCTAAAAA  
125651 AAGAAGGAAG GAAGGAAGGA AAGAAGAAAG GAAGGAAGGA AAGAAGGAAG  
125701 GATAAATATG GAAAGAAAGA GAAAAAAGG AAGAAGGAAG GAAAGAAAGG  
125751 AAGAAGAAAG AAAGAAAGA AGAAGAAAGA AAGAGAGAAA GAAAGAAAGG  
125801 AAGAAGAGAA AGAAGGAAG AAGAGAAAGA AAGAAAAAGA AAGAAAGAAA  
125851 GAGAAAGAAA GAAAGAAACT GTCTATTGGG AAGGGCGTTG TTTACTGCTT  
125901 ATCCAGCAAT ACCCAGGTAT TTGTATAGGT GTTGACCTAA ATCTATCTGA  
125951 CCTTGAAGGC TGTCTTCAAA TCTTCTAACA GGCAAGATAA ATAAGGTCAC

FIGURE 3PP



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

126001 AGAAAATGCA TACCTGTTTG TCATTTACCT TTATTCCTGG GCCTATAGAT  
126051 AGTTCCTCTG TCTAGTAGCC TCTGGGCTAC TCATGGGAGT GGGGATAGGG  
126101 ATCATATGAC AACTTTCTTC TCTTTTACGT GTTCTGGGTA CTCTTGATA  
126151 CTGGTCCAG GGAACAGCTG CATAGCTAAG AGATGGGTGG GAAGGACAAG  
126201 AAAGAGTAAA GTGTTCCCTAG AGGAGCCAGC GAGGCAAGGG GTGTTTACT  
126251 GACCTAGTCT GTTTTATGGC TACATGAGAA CCCTAACACT GCTCTCCCT  
126301 TGCCCTGGCT GCTTTTCCAG GTTCTTGTC TCCCAGACA GCTCTAGCCA  
126351 GGGCTCAGGG TTCCCTAATG GCTGTCCCAA TCCACTCTTC TTTTAGCAGA  
126401 GCACCCCTAG CAAGAAACCC ACTGTAATCT CACCCTACTT TTCTGCTTTT  
126451 ACAACATGTC TTCCTTCCGG GTGAACATTC ACAAGCTAAA GAAGGGAAGT  
126501 CACCTTCCCT TGAGGAGAGC TTGCTGAACA CCAGAGGATT TCACCTCTTT  
126551 CCCCCTTCAT AATGGAATAA TCACTGAGCT TTCTGCTAGA ATAAAAAAT  
126601 CATGGGCCGG GCACGGTGGC TCACGCCTGT AATCCAGCA CTTTGGCAGA  
126651 CCGAGGCGGG TGGATCACTT GAGGTCAGGA GTTCAAGACC AGCATGGCCA  
126701 ACATGGCGAA ACCCATCTC TACTAAAAAT ACAATCATT GCTGGCGCTG  
126751 GCAGTGCCTT CCTGTAATCT CAGCTACTCG GGAGGCTGAG GCAGGAGAAT  
126801 CGCTTGAACC TGGGAGGCGG AAGTTGCAGT GAGCTGAGTT TGCGCCACTG  
126851 CACTCCAGCC TGGGCGACAA AGTGAGACTC TGCCTCAAAA AAATAAAATA  
126901 AAATAAAATA AAATAAAATA AAATAAAATA AAATAAAATA AAATAAAATA  
126951 AAATAAGACA AAGGAGATGA TAAATTAAAG CCTAACATTA CTATATTTCC  
127001 TTTTACTGTA AGAATATGGT TTATATCTGT GGAAAGATGA GTTTCCTAAT  
127051 ACAACCTCAG AATTAGATAG GAGATCACAA GGGGTAACTC CCAAAGGAA  
127101 GGGGAGAGGA AGGGGCTGGG TTAACAGTTC CTGGGTCAGA ATAAGAGTTG  
127151 AGTGGCCATG TGTATTGCAG CAGGTGGAGC TCCCTATACA AGGAAAGCAC  
127201 TGGGCGCGAA AATGAGCATT TATCCTATTA GAATGGTCTT GTGCCTTCAC  
127251 TCCCTGTGCA CTGCTTAGCC AGGGAAGTGT GCCCTTACAC CTTGTTAGCC  
127301 AGTGAAGAA GAGTGAGTCT ACCTTTTAGC TGTCTGTAGC ATTGTTACTG  
127351 TAGTATTATT GTATGCTTCT GTTTATGATG GTGGAGAGGC CATTGAGAT  
127401 GGAGGCATTG TTCATCATGC TGCTGAAATT TGAGTAGGAT AAATTAGAA  
127451 TTTGGATAGG TGAGCAGCTG GGAGGGGCAT CTTTGGGAT TGTGAGGAT  
127501 TACTCAGTTG ATGTGGCTCA TCAGCAGGTG TCCCATCTC CTTACCTTTC  
127551 CATGGGCTTT CTTTCATGCT TCAACCAAAG AGAAGGACCC TTCTTCAGTT  
127601 AAGGATTTGT CTGGATGTTT TCTACATGTG GTGTGATCGC TTATGAGTTT  
127651 TCCTGCCTCT GAGACCTACC TTCTGAATGC CTGACTGACA AAGATTTAA  
127701 GGTGCTCCAT TACAGTTGGC ATGCTTTTAT ATTCCACATG CCAGAGCTAC  
127751 AAGAATGTTA TTATTTCTCT TCTTCTCTCC CAGGTGATAT ATTTGGTCAC  
127801 CTAGGTGTCA TTAGGTACTA AGCTTTGCCT TCAATATCTA CCAGGGTGGG  
127851 GCACCATGGA CAGTGCCACA AAGACCTTTT CAGACAAAGG CTCAGATCTT  
127901 CCTGCTGGAC TTTGTGTGCA AGAGGAAGGA ACTTTTCTCT TTCTTTTTC  
127951 CCCTTCTCTC TCTCTCTCTC TCTCTCTCTC TCCCTTCCCT CCTTCCTTCC  
128001 TTCTGTTTCT TCTTCTCTCT CCTCCCTCCT TCCCTCGAAC TGCCATGTCC  
128051 CTTGCAACTA GAATGGTCCC TGACATTTAA GGTTTTAAAT AATTATGTGC  
128101 AGAATGAATT AAATGCCAAA TCTTGTGTTT CAATAGCGTA TTATCTTCAA  
128151 ATGTTAACAG CAACCAAGTT TTTAGAAATG AAACTTTTGG AAAATTTTAA  
128201 TTAAAGTCTT CCTGCAGTGG AACAGTTGAT TTTTTTTTTT TTTTTTTTTT  
128251 TTTTTTTTTT TTTTTTTTAG TCGGAGTCTC TCTCTGTTGC CCAGGCTGGA  
128301 GTGCAGTGGT GCAATCTTGG CTCGCTGCAA CCTCTGCCTC CCGGGTCAA  
128351 GTGATTCTCC CTGCCTCAGT CTCCTAAGTA GCTGGGATTA CAGACATCTG  
128401 CCACCATGCC CAGCTAATTT TTGTATTTT TAGTAGAGTT GGGGTTTCCC  
128451 CATGTTGGCC AGGCAGGTCT TGAACCTCTG ACCTCAGCCT CCTGAAGAGC  
128501 TGGGATTACA GGTGTGAGCC AGCATGCCTG GCCTGAGTTT TTATTATTTG  
128551 TGAATTTTAT TTTTTTCCAT CCCAGATGCA CCTATATTGG TAGCTAGTG  
128601 ATAAAAACAA TTTACCCATA TATACCAACA TCTTTTCAA GAACCTTGCA  
128651 TAGTGAAACC AGCAAAGTAC TGAAGTGGCC AGTCTGTCAT AGGTGTCTTG  
128701 CAACATGACT CAGAGTCAGA AGCTGGATAT AAACCTTTTT CTGTGTGTGT  
128751 ATATATGATC CATTTGTGTA TTCGGCTTTT GAGTGGGACT TTTTCAGTAG  
128801 GCTTCTTGAA GGTTCACCTT CACTATTCTC ACTGATGTGT GCTTACAGCA  
128851 TCTCTGCCAT GGAGATTTTA GGCAGAGAGT GTTTAAAAGC TCTACTCATA  
128901 GTTTATAGAA TTGCTAGTGC CACAAGGCCA TTCATTGTGG ATGATGAAAT  
128951 TATTAGTTAT AAGTGAACCT TCTAAATAA ATCTTGAAG AAAACATGTT

FIGURE 3QQ



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

129001 ATAAGAAAAT GAAGTCAGTC CTCCTACTAG GCAGTCCCA TCATCTTTCC  
129051 ATTTTGAGAA ATTATCTCA GTTCAGATGT ATTACTATGG TGATGTGTTT  
129101 GCATTTCAAC AAACCAAACC AAGCCGTAAA CTGAGCTCTG CATGTTTAGC  
129151 TTCTGTCTTA GGATTTTAC CGCAGTGTCT TTATTCTGA GTAAAATCCC  
129201 CGACATCTCG GCTAGAAATC ACAATGAATA AATAATTTCC CAGCCAGACA  
129251 AAACAATCTG AATTGCTAAT CTCAGAATTC TAAGAAATTA CATAAAGATG  
129301 CAAACAATGG GGATTAAAGA GGGGGTAAAA ATTAAATGAA AAAATAGCCC  
129351 ACAAAATGAAT GGAATATATAC ATGCTCTCCA AAATAACATT GTGGAAGTAA  
129401 ACAAAAACAG ACAGAGAATT ATGCTTAATG AGAATTGGAC ATGTGGCTTA  
129451 GCCCTCTGAG GCCTGAAACA AGTAAACACT TCCCGAATTG TCAGTCCATA  
129501 CATCCCTCTC TCAAAAGAGA GCTCTTAGAA CTGGCTCCCT CTCCTCCTGT  
129551 TTACGAAGCT TACTTGTCT TTGGAACAAT TGCACATATA ATTTTAAACA  
129601 CTAATGAAC TCTACAGGAG ATGGGTTTTG AGTACTTAAA AAATTCCTAT  
129651 AGTTTGATC AATCAGATAC GGGAGATAGT TTTGCAAAAT ACTGTTTGTG  
129701 TAAAGAGAAG GGAAGAACAT GCGCTCTAGT CTAACCAATC AACAAAGTGT  
129751 GAAAACACGA TTTAGACAGA AGTACAACGA CCATCCTATC AGTTCTACCC  
129801 AAATATCATA TCAGACCATC TCTTCCCTGA TAACAGTTTT GTTAGCCTAA  
129851 GGACACATTA GCTCAGTTAG ATCTGGGCTC TCACAGAGCT TTCTGCTAGC  
129901 GGCTCTGCTT ACTGGTAAGT AAGCCATGCA ATTTTGCCTA GCAACCCAC  
129951 CGTGGAAACA CAGCTCCATT CTGTAAGTGG CAGGGGGATG TGGCAGGGAG  
130001 GCAGGGAGAG TAGGTTTGT GCCTCTCAGA ATCCCTCTGC AGCTGGTTCC  
130051 TGACATCGCA AACGTTATCT GCAATTCTTG GCAGTTTCGG AAGGATGATG  
130101 AAAAATGGGA CGGGGAGGTG GCTGAGCCTG GGGTTTTGGA AGTAGGATGG  
130151 AATTAATTGG AAGGCAAATA AAAAAGCTTC CAAGATTGTG AGCTGCGACT  
130201 GTCTGAGAGC TCAAACAGAG GTTGGCAAGA GGAACCAAAG GAGAATGAGG  
130251 ACATTTTTTG TCATTGACAA TGAGGTATAC AATATATCCA GGAAAGGACA  
130301 ACCAGCAGCG ACCTCCTGAA GCTAAACAGA GATTATCTTA AGCCACATAT  
130351 GAGGGAACAT TCCTCAATGG CAAAGAGAAG CATTAACCTT GGGACTGTCT  
130401 ACGTCTAAGG AAAAATTGGA GCATTTACAT TAAAATGGCC TGTAAACAAG  
130451 CATTGAATAT TAACCAGGCA CTGTGCTAAG TGTTTGACCA CTTGTTTAAT  
130501 CTTCCAAACA ATCCGATGAG GTGGGATTC TTATCTCCAT TTTATAGAGG  
130551 AAAAAAATA ATGCACAGAG AGGTTGAGAA ACTTGCTTAA GGTCACTCAG  
130601 CTATTTAGCA GTGGGGTTGG GATGTGTCTC AGGCAGTCTT TCCCTAGACT  
130651 CTGTGCTCTT AAACACTACT ATGGTTTTTC AGCAGCAGTG AACAGTTACA  
130701 GGGCTAATGG GGATAAGAAA ACTGAAGATC ACCACACGGC ACATGAGATG  
130751 GTTTGTGATT CCATTGTGAA AGCTGCAGTT TAAAATGTTT AATTAAGGCA  
130801 ACTTTTTTTT TTTTAAATA CCTAGAGGGC AGCAAAAACA TGGGTATCTA  
130851 GAATAACAGA TATTGCTAAA ACCTTACGCC CACAGCACTT CTTTTATAG  
130901 CAAAGTATGG GTATACACAT ATTTTCATAC ACCTACACAC ACATACACAT  
130951 GCAAGACGCG CATTCTTAA GTCCCTAAAA TACCCTGATA ATTTAAATGCT  
131001 CCAAACATTC TCTGAGTGTG ACCCTTGAT GTCTAGGAGA AGCAGCCAG  
131051 GAACACACTT GTTAGCCGGG GCAATGAGTA GTGGTGAAAT GTTTACCTTG  
131101 CTGATAAAGT CTCCAGTAGA TGATGCAATT AAGATGCCAC GATCTAGCCT  
131151 TTGTTATACA CCTCCTGTG TGCCGTCAA CAAATCCACC GCTGTCTTC  
131201 CCCATCTTCC CTCCTGCCCA TCTCCTGAAG TCCAGGAACG TCTCCAGCTT  
131251 CCTACGTACT TGCAGTCTC TTTTGCCAACTCAACCTCA TTTAGATTGC  
131301 AATTACATTC ACATCTTAAT TTATGACTTA ACAAGCATCT CACAAACATT  
131351 TAATTCACCT TAACCTCACT ATGCATTGA GGAGGAATAT TTGAGGAGGA  
131401 ATGGTACTCC CATTGCCAGC AATTAGATTG ACTTAATGAT CTATGGCGAA  
131451 ATCTCCTTTT GGGCTTTGAA CTTTTCATAC ATTTCTGCAA ACAAACCTAG  
131501 GCTAATTAAA GTAAGTTCCT GGATTCTCAG AGGGGCTTAC CTGCCTTCAC  
131551 AAAATCCTCC TGTAATATCC AACATGGAAA TTTATGAAAT AGACAAAACCT  
131601 TTCCCTGCAG TTTTCAGGTA ATTTATCTTG TTACGACACT TTCATGTGTG  
131651 GAAAAGTCGA TATTTTCATA TATAGTTTCA ACAATATCAA TAAATTGTAA  
131701 TTTTTTTTTC AGATGGCTTC TCTGAGGAGA TTAGGAGGGT TTCTATATCA  
131751 AAGCATAGAT CAAATTATTT TTCCCTGTTT CCATTTTATA TACCAGATGC  
131801 CTTCTTAGGA GTTAGAAAAG TACCTCCTTT TTACAAGGAA GGATGGCATT  
131851 TCTTTAGCTT TTCCTGGACA GATCACCCTG TGACCATTTT TTATTCTCAG  
131901 TCTTCCTTCA CAGAAGGGAC AGAGGACTGC CCATTTTCAG CAGGAGTTAG  
131951 TCTGATTTCT TCTGTTAGAT GCAGACGACT TTGTTTGACA ACTTCTTTG

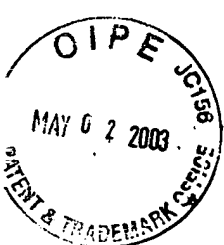
FIGURE 3RR



Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

132001 GGTGTGGTGAA TTGTTGAATT ACTTGAAAAG CTGTTTCCGT TGTTAAGCAC  
132051 TGGACTGAGA ATTAATTACA TCAGAATTCT AATCTCGGCT CATTAGTGGC  
132101 ATCATTTTAT GCAAGTCCCT TAACCCCTCT TGGCTTCAGT TTTGCATGTG  
132151 TAAAATGAAG TATATAAAGC AAAGGTCTCT CTGTGCTTGG TGCAGTGAAG  
132201 AGGATGCAGG TCTCATGGTA CGGATTTCCT ATATTGATTG CCCCAAATGT  
132251 GGTGTACGTT TGCAGAAAAT TCATCTAGGC AATGTAGAAA GGCCATACAT  
132301 TCTGGTGTTA AACACATCGT TCATATATTT ATGCTAGTAT ATGATACCAG  
132351 GGCCTCCTGA TGACAGTCTC CAGCACCAAT TCTGAGAATT GCGAGGATTT  
132401 TTCAGCTTAG AGTTTTTCAG CTTAGAGTCA ATTCCAGTGT CGCCTTCAGC  
132451 ACATCCAAAG AGAATATGAC CGATGCTACC AGTCCTGCTC CTGGACTCCA  
132501 CTGGTATGAT TCCTTTGCC CAGTATCAGT CTAATTCCCA TTCTAGATGC  
132551 TTTTTTCTTA ATGACCCAAC AACTGACTCC TTCAGGAGCT GGCATGAGAT  
132601 GAGATTTGTT TGCAGAGATG TATAAAAATT TCAAAGCCCC AAAGGAGATT  
132651 TCACCACAGA TCATTAAGTC CATCTAATTG TCGTCCTACT ACCCATTTAG  
132701 ATGGGGACCC GTTTATGCTA ACTCCTATCC TGTCTCTTGT GAGTGATACA  
132751 GTCAACACAC ATGATGATCA CAGCACCAGC TCAGACAGGT GTGTTTTAAA  
132801 ACAAAGTGT GTTATAAATG TACAGCCTCA GCAGGGAAAA TGTGGGGGCG  
132851 AAGAAACACA CAAATACTTG GCTAGAGTCG GTCACAGGTG AAGATGGGGA  
132901 TGACTGTGTT TTCCGTTTCA TCCAAACATT TTGGCCTGAC TCAGATAATT  
132951 TTTTTTCCAG CATATTCTGT TTGACACAAG GGAACGGTG CAAATCCATC  
133001 ACCACCATTG TGGAAAGAGC TCCAAACTCA TTCTCACGAA TGGTGGATCA  
133051 GTAATACTAC ATGACAAATG GTAGCATTTT TGGGAAACCA TTATATTTGC  
133101 ACCAGTGAGA AGTCAGAATC AGCATTTGGG CTGCAGTCAT GGAACCATGC  
133151 AAGAAACATT CAAAGCATTG GCTAAGCAGG ATTTTTTTGT TTGTTTGACC  
133201 TGGTGTCCAC GAACAGGCTT CAGGGAGCCT GAGAACTCC TAGACCCTT  
133251 GAAAAATTCT GAATGCACTT TTCTAGGAAA GAGTTCACAG CGTTCATCAA  
133301 ATTTCTTCCA AGCAGCCAAT GACCAGAGAA AGGTTAAAAG TCACTGACAC  
133351 AGTACCGTTT TCTGTGCATC TATATCCTGA ATCCAGGGTG ATGCCGCTGA  
133401 CTTGCCTATC TTTCTCCTTT GGTCTTCCTA GAAAAAGCAA GTGAGTCAGA  
133451 CCAAGATCCG GGTCACTCTA ACCATCCTGT TCATCTTGGC CGGCTGCATT  
133501 GTGTTTGTGA CGATCCCTGC TGTCATCTTT AAGTACATCG AGGGCTGGAC  
133551 GGCCTTGAG TCCATTTACT TTGTGGTGGT CACTCTGACC ACGGTGGGCT  
133601 TTGGTGATTT TGTGGCAGGT AAGCACCTTG GGCAGGCCAG GCACTGGGGC  
133651 TCTGGCGGGA AAAATAATCT GTTGGCTGTG CTTTTCGCAA TCGATAAAAG  
133701 ATGTTGCGGG AGAAGCAAAT GAAGATGACT CAGTGTCACT ACTGCTGTGA  
133751 AGAGGCTCAT TTCAAATCCC TAGTCCTATG TAATATAAAT ACCATAGGTT  
133801 TTTTTCTGCT ATGAAAAGAA AGCCAACCCT TTCCTTCTCA GGATGCTTAT  
133851 TTCCCTTATC GTCACACAAA TTATGCAAGA CTAAAGTGAA TTTCTCATTA  
133901 AATCTTGAAC TTCTGAATTG AATTAACCT CTCTAATCCA ATGATAAAGG  
133951 CTGTGTTAGG AAGTGGCACA TAGGAACTC AGATGAGATT AGCATAGAAT  
134001 TTGGTCTGCA GTGACCTGCA GGTTCACTT CCTGACTCCC AGGTGAGAGC  
134051 CATTGTCTCT GCAAACGTTG TCCTGCACAT GCCCAGATAC AAAGCTGAGG  
134101 ACTTTGGTGA CTATGGGGAG CTGAGAACTG CCCAGAGGGA ATATAAGCTC  
134151 ATGGATTATG CAGGAGTGTA TATACAAGCA ATAGCCTTCC TTGTAAAAAT  
134201 AAATGTGGAT GAGCTATGTT TAAGGAAGTG AAAAAAAAT CATCAATTTT  
134251 ATCTAGGGCC AGGGAAATTG CAAATGAAAT GAGATTTAGT TTCATATGTG  
134301 CACCAGTTTC CCAAAAGTGT GGTAGAAAGG TACGGATAGA AGGAAGAGGC  
134351 CATCCTTCTC TTTTTCTAAT AGGATAGTTC TAGATGTTCA GACAAGTGAT  
134401 CAGTTTCTAC TACAAGAAGT GAACACTTTG ATCAAACAAC TCTATCATCT  
134451 GTCACAAGTT TGAAATGTCT GGATGGAGTG TGTGTGTGTG TGTGTGTGTG  
134501 TTTCTTTTAC CAGTTCCTGG TGAAGTGGCA GCCTGACCTG AGCCCTAAGC  
134551 AGACTGTTTT TTTTTGTTTT TGTTTTTGTG TTTGTTTTTT TTGAACAGGG  
134601 TCTCCCTCTG TTGCCAGGC TGGAGTGCAG TGGTGTGATC ATGGCTCACT  
134651 GCAGCCTCGG ACCTCTGGGG CTCAAGTGAT CATCCACCT CAGCCTCCTG  
134701 AGTAGCTGGG ACTACAGACG TGTGCCACCA TGCCTGGCTA TTTTTTATTT  
134751 TCATTTTTTG TATTTTTCTG AGAGATGGGA TTTAGCCATG TTGCCCCAAGC  
134801 TGGTCTTGAT CTGTTGGGCT CATGTGATCG GCCTGCCAAA GTGCTGGGAT  
134851 TACAGGTGTG AGCCACTGCA CCTGGCCAGA CTGTTCTTGT TTGGCGTGTG  
134901 ATCCCAGCAG TGTCTTGATT TCTCCATGGA ATACTGTGCA CATCAGGAGG  
134951 ATGGGTTCTG GTCTCTGGGA GTCTGGCAA CAGGAAATTC TGGAAAGAGAT

FIGURE 3SS



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

135001 TGCTGAAGGC TCATCAATAG GGGCATGCGT GCCCTCCCTGT TAATTTTATA  
135051 ATACAAATAA CTGGCAGAGT GGTTTTGTAG CTC'TTCCAAT TGGGCAGACA  
135101 AAGACTGAAT TCCACTTTGT AGAAATAATA GGGTTTTTTT TCCCCCTCCT  
135151 TTTTATTGGT TAAGGACTAA GAATTGCAAA GTGACTAAAT TTAGTTTTTT  
135201 TTAGCTTTTA ACTAAAAATT GATTTTGTAGT CAGTGTGACT AAAAAATCATT  
135251 TACAGAAAGC CTGTAGCCTG GGA'CTTACC CATTTTCCCC TTACGCACAG  
135301 TGCTCAACCA TGGATGTCTA GTTAGTGGCC TCAAGCTCCG AAGAGAGACT  
135351 GTACAGAGAA ACTGAGAAAA GTAAGAGGAA CAGTTATAGA TGTATTCCAG  
135401 TTAATCCCTT GGCATCATCC GTAGCCGGTC CGTGGGAAAA CTCAGTGGTG  
135451 TTTCCAATCT AAGGCAAACA CATGTAGTGG CAGCTGGAAT TTTGA'ACTAT  
135501 TTCACAAACA TCTTTAAGTA TCCAAAGCAT AACCTGCAGT GGGTGGTGAT  
135551 TTAGAGTCTT CTGGGATAGC ACTGGGCTGT CCTGAGGACT GTCTATTATA  
135601 AGATACCTGT GACAGACACA GATCTCTAAC CAATGGCTCA GTTCAGTCTG  
135651 TTAATCTGAG GCACAAATAG CAGAGGCCTG GGAGTGAGAT TTTTAAAGTG  
135701 ATGCTTTTAT TATTTGTAT CTACCATGGA CTGAGCACTT AGTACAAACT  
135751 AGTACTTTAC CTTATCTTTA CTTACCTAGT AAGGGCACAA CCTACACAGT  
135801 CCCAGGCATC CACAGTTTTA CTGCCCTTGT CAGTGATTAC AGAGCCATAT  
135851 TTCCTTTGTC CTGAGGTTC TGTAGACCAC GGTCTCTTAA AAGTCACAGT  
135901 GCTGACTGCA GTTAGGCCAG ACCCCTTCCA AGCTCCAGTT TTCCGAGCTT  
135951 ACACAGACCA ATCTGGAGAA TGCATGCCTG AAAAGACTGG AAGTTTATCT  
136001 CTATCTTTTG GTAAACAGTCT GCGAGTGATA GGAAGGTTG CCCAATCATT  
136051 GGAAAACGAT ACATTAAACA GAGTTGATGG TTGCTGTGAT TCGACATAGT  
136101 ATGA'ACTCTA CTAGAAATGT AATCAGATCA TTGATCCTGC AGGATTGATT  
136151 GCTGATTTAT TTTGCAGCTG ACTCACTTTA GGACAGCCTT ACAATATTTT  
136201 GCAACTCTGT CTGGGAGCAC ACACAGAACT CCGAATCCAG ATAAGCAGCT  
136251 CAAAAAGGGA TACTTAGAAG GGTGTTGACT GCCTGCTTCA TTGTTCTTGT  
136301 TTCACTAGCG CACCCTAGTG ACCATCTTTG CTGGGTAATA GTGACTTGCA  
136351 AAGGTAATA TTTACTCCA GATAGCCAC AGGAGAAAGC TACAGATTTC  
136401 TCTGGCGTAG CACAGAAACG AAATGAACCT CAAAAACCAC TTACTGGTGC  
136451 GGA'ACTCAG ATCGTATCCT ACAGCTCTAA TGATGCAGGA GAGAGTTGTC  
136501 TGAAAGGAAA AACC'AAAGC AGCTGCACCA AACC'GAAGG G'GCTTGGCAC  
136551 AGAGAAGTTG GAATTCTAAC GTTAAGAAAGT GGCAGCAGCT GTCGAGCCTC  
136601 ATGGTCTGCT GCGCTGTGTT GCTGATTGGG TTTGAGCTTG TCGAGAGGAG  
136651 CCACAGGTCA CATTTCTTGC CCAGCTGCCT TTGCCGTAAG ACTCAGTGGC  
136701 GCTAGATGTG GTTACAACCT TGGTCTGGTG GGAAAGTCTG TAATCACTCA  
136751 TCACCTAATA CGATAGTTAC CAATCCATTG CTAGTATCTG TCATCTTAGA  
136801 AATGGCCACT GCCTGCTTCC TTAGGCAATA GCGTTTCCCA GAGAGAGATT  
136851 GAGGCTGATG TCCGTTATTT CCAGGAGCTT CCTCACTTCT TTAGGACGGT  
136901 GGGTTGGGCT TGCAACCTGT TTTGCATGGC TGCCTCCAGC AGTGTCTGTA  
136951 GGAAGGTTAG AATAAATAGG CTAATTATTC AGAATAAATG ACTGGTCCTT  
137001 TCAATGGAAC AGCCAGTCAA TGCAATCAGG CAACTGGCCA ATTTGGTTTG  
137051 ATGGATT'TTT ACTGTAATCC TTATTTATAA AATAAAGGGA TTGGCCTCAA  
137101 AGGTCCCTTT TAGTTCTAGT TTATGGTGAC TCTAATTACT CAGCCTAACT  
137151 GACCCTTTGG AGTAGCACTA TGTAAACACC ATTCTCAGT TAGCATTA'AA  
137201 TCACTATTGC TTGCATCAAA ATCCCAGTAA TGCCATTAAA GCTAATTTTA  
137251 CTTTCACACA TCCACTTGTC TCTTAGTAAA TGTATGGGTG CTTAAGATGG  
137301 AAATGGTTCC AAGAATTCCA AACCATAGGG GGTGGTATGA TTATATTTGA  
137351 TTTTTATTAA AATAAA'TTA GAGAAGTTA AGAAAAAACA ATGACAACCA  
137401 GGCCTGATCT GTTGTCTGT AGTTCAGAGT TATTCATCCT TAACGCTCAG  
137451 GTCAAGCATT AGTAGGTCAA GTTGGCCACT GGC'GTTTTTT ATTTCTGGTA  
137501 TTAAGGTTAG TGGTCAAGAA TCGAGGGAAG TAAAGCCTTA AGTTAGCCTT  
137551 TTTTGGGTAA GGGATGGGTA CCCCCCTTGC CCTCTA'ACCC CGGTCCACCT  
137601 TGTACACAGC AAACCTAACA GCTGAGTGTT AAACAATGAT GGATGACGTC  
137651 TTC'ACTACAT GGAATGGAAT ATGTGTTCTC TGCAAAGACC ATATGCTAGA  
137701 TCATGGTTAA AGTAA'CATTT GGTGTTTTC AGGGGGAAAC GCTGGCATCA  
137751 ATTATCGGGA GTGGTATAAG CCCCTAGTGT GGT'TTTGGAT CCTTGTGGC  
137801 CTTGCCTACT TTGCAGCTGT CCTCAGTATG ATCGGAGATT GGCTACGGGT  
137851 TCTGTCCAAA AAGACAAAAG AAGAGGTAGG ACCCCTTCTT AACCTATGA  
137901 ATGTTCTCTGA GAACAGATGA GCTTGTGTCC AGAATTGCCT GTCTCTGTCC  
137951 TGTGGGCTGG AGTGT'TTCTG GCTCGGTTTT GCAGGGGGAG CGGGGGGCGG

FIGURE 3TT





Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

138001 GTCATAGGCT TCCTCATGTT GAATCAGTCC TTCAAAGCTA AGGAGAATAG  
138051 AATACAGTTA TTTCTGGATT CTTTTTTTGG CAGGTGAGAA AATATGGTGA  
138101 TTCGTTTACC AGCCCATAAA TCCTGGAAAA ACTAGTAAAC AACAGCTGAT  
138151 TTTAAAAAAA TGAAATGAA AATAAATAGG AGAGGTAGAC TATGGCTGAG  
138201 TGTGTGTGTG GGGGGGTGCA GCCTGTCCTT CCGGTCTCAG GGTCTGTGCA  
138251 GAAAGGCAGT TGAACGCCAA GAATCTTTCC TGATTCAGTA AGAAACTGAA  
138301 ATCATCGAAC ATTGACCAGC TACGGGGAAG TGAGCCCAAT GGGCCTCTTT  
138351 CACTTATCCC CTCTTGGTTG TCACATCCAT AGAGACAAAT ATACATCCCT  
138401 GAGGAAGGGC CGTGCATGTA ACTTTACATG AAGGGAAAGTA AAGGAAGACA  
138451 TATGAAGGAA AGATAGATTT TGTGATTAAA AAATAAATAT TCATGTAGCT  
138501 CTCTTAGGAA GAGAGGAAAA GAAAGGAGGA AGGCCAAGGA AGGAGAAAAA  
138551 AAAGAGCTAA AAGAAAGGAA GGGAGATAAG AAAAACCAAA GAAATAGAGG  
138601 GCCAGCCTCT GTTTGCTTCA TTCTGTATAA AAGGCCCCAG GAGAAAGTTG  
138651 CTGAATGGAG AGATTTCCTA CATCAGTTTC CTGGGCCCCT ATGCTAATTT  
138701 TCCTGGTTTA TATAAGTAAG CCAGGAAAGT AAGCAATGCA ATTTCCAGAC  
138751 CGGTTCCCCA GACAGCTAAC TGACCTGCTG AAAATCAGCT ATAACAAAAG  
138801 AGAAGGGAAC AACATGAATA TTGACTTTCC TGGATGCACA AATTTGAGTT  
138851 CCTCATTGTC AGAGGGAAGC ATGGGACTTA TACTGTCTGC CCTGTTTATT  
138901 AAGAGCCAAG AAATTTGGTG CTGATCCTCA GGCAAACTC CACTCTAAGG  
138951 AGGCCTGTTT TGTGGGCTTT GGCAGAAATG GCCGTCTTCC TGCACCCTGA  
139001 CTGGGGGAAG TGGGTTACCA GGTGCCCTGG AGCATCTTCT TAAACCAGGG  
139051 AAAGCCCCAC AGCACATGAC CATAGCATGG CCCAGATAGG GTGGCCACCC  
139101 ATCCCAGTTT TCCCAGGACT GAGGGAGTTC CTAGGACACA GGACTCTGTT  
139151 TTAAACTGG GACAGCTCA GGCAACTGG AACAAAGTTG TCACCCTGCC  
139201 AGGATAGAAA ACCAGAAAGG CAGGGAGGGC AGAAGGCCTG CTGAACATCT  
139251 GCTGTGCCCA GGAAGTGTG AGGTGCATTT CCTGTCTCA GGTGAGCTAT  
139301 ATATGGTCAC TCAAGTGAT GTTGGGGGAA TGAGGCCATG CAATTGATAA  
139351 GAGAGAGCTG AGGCCAGGC CTGTCCAAT CCACATTTTA ACCTCTCCTG  
139401 CAGGATGCCG TCCCCCTCTC TTAAAGTCAC CATCTCCAAA TCTGAGGCTT  
139451 CTTGGGGTTG CCCACCACGT GTGTCTCCCT GAGCCACCTT ATTTACTAGC  
139501 CAATTAGGGA TGGGTGTCCA GGTGGCAGAA GTACTAGGGC AGAAGGTAGC  
139551 ATTTGCACCT CCCCCCTGGG CATGTGCTCC GTCACCTCCT GGCCTCCCCG  
139601 TGGGGACACC CGAGGGCTGT GGGTGTCTGG AGGCCAAGGC AGGGAGGCAT  
139651 TTGTGAGCAT ATTGTTGCTC TTCTGTCTCT TGGCCAGGTG GGTGAAATCA  
139701 AGGCCCATGC GGCAGAGTGG AAGGCCAATG TCACGGCTGA GTTCCGGGAG  
139751 ACACGGCGAA GGCTCAGCGT GGAGATCCAC GATAAGCTGC AGCGGGCGGC  
139801 CACCATCCGC AGCATGGAGC GCCGGCGGCT GGGCCTGGAC CAGCGGGCCC  
139851 ACTACTGGA CATGCTGTCC CCCGAGAAGC GCTCTGTCTT TGCTGCCCTG  
139901 GACACCGGCC GCTTCAAGGC CTCATCCCAG GAGAGCATCA ACAACCGGCC  
139951 CAACAACCTG CGCCTGAAGG GGCCGGAGCA GCTGAACAAG CATGGGCAGG  
140001 GTGCGTCCGA GGAACAATC ATCAACAAGT TCGGGTCCAC CTCAGACTC  
140051 ACCAAGAGGA AAAACAAGGA CCTCAAAAAG ACCTTGCCCC AGGACGTTCA  
140101 GAAAATCTAC AAGACCTTCC GGAATTACTC CCTGGACGAG GAGAAGAAAG  
140151 AGGAGGAGAC GGAAGATG TGTAAGTCA ACAACTCCAG CACAGCCATG  
140201 CTGACGGACT GTATCCAGCA GCACGCTGAG TTGGAGAACG GAATGATACC  
140251 CACGGACACC AAAGACCGGG AGCCGGAGAA CAACTCATT CTTGAAGACA  
140301 GAAACTAAAT GTGAAGGACA TTGGTCTTGG ACTGAGCGTT GTGTGTGTGT  
140351 GTGTGTGTGT GTTTTAATA TTCACACTGA GACATGTGCC TTAAACAGAC  
140401 TTTTGTAGTCC AAAATTACAT AGCATTGAAG AATATATTTT ACTGTGCCAT  
140451 AAACAAGTGA AAGCTTGCTC TGCCAAAAGG AATCAGAGAA CAAGAAGTTC  
140501 ATTTTCAAGTA GCAAACGCAG GACACACCAA GAGTGTCCGT GCACGTAGCC  
140551 GGTTCCTGCC GTACATGTTA AGGGCATTTT AGTGGCAGTG CTGTACCCCT  
140601 GGGCAGTGCT ACCTGGGCAC ACACGTAGAC AAGGGCAGCT ATTCCTTAGA  
140651 CCAGCCTCCT GAAAGAAACA GGTGTGTCTT TTTAGTGGAG TCGTAGTAAT  
140701 ATGTGCACAC ACAGAAAGGG ACCTGATTGG GTGGGAGCTG GTTATGTGTA  
140751 ACTAGCGTTG GAGTTGACAT TTTGGCATGT GCTCTGAGCT TGAATTTTGA  
140801 TACCAACCAT TCAGTGCATC ATACCTAGTC TTTCTATGCT CCAAATGAAT  
140851 GTCTGTGGGG ACCTGAGAGC ACCTGGAATT TGTGGAAGC AGATCAGAGC  
140901 ACACGTACGA AAAGGTGCAA TTGCTTTTCT CATGACAAAA GAAAAAAAT  
140951 AATCACAAAC ACATCACACT GTGGATATCA CCTTAACCAA TGACAGAAGC

FIGURE 3UU



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

141001 CTGCTGAGTT TGGTCTTTCT CACAGGGGTA GGTAGTCCAC ATGAACTGGC  
141051 GAGCAGTGGT GAAAACATGA CATCAACTGC TGCCTGGTTA AAGGCCAATC  
141101 ATGCATTTTC CTCAGTGGGT GCAATGGTGA CAATAAACTG ATTTGGAAAT  
141151 GTCCATGTAC TTTGGTTATA ACTTGTTTTG ATAAGAGGGG TAGAAATACC  
141201 AAAACAATTG CCTTGCATGA TGCCAGTGGC TTGCTGTTCT GTCTAGCTGA  
141251 TCCTACATTT TTACAAAAGT AGACATCCTG CATTTCTGAG ACACACTGAG  
141301 GAGGACCATG GCATCTTTCC ATCTCAGGGC TTTTGTGCCC TTGGGTGTCT  
141351 TAGGGTAGAC ATAGTGATAA GATCCAATCT CGCTATCTCC AAACAAAAG  
141401 AAAATGTACC CCTTGTACAG TAAGCTTGAA ATGTTTTTAT TGCTTGCAGC  
141451 GTAAGTGCCA TTAATCCAT TTAACAATGA TACTTAGAAA TATTTAAAT  
141501 ATTTTCAATTT ACTTTTATGT TTGGGCATTC CTTTATCTG AAAAAGTCAC  
141551 CACTGCTCCT TGCTTGTTC TACATCTCAC ATCGTTACT CACTAAAACT  
141601 GGAACACCTT AGACTGATTG TTCCAGGCA AACGATAAGC TAACACATCA  
141651 TAATTATGAT TGGTCTGTGA GGCTAGAACA TCCCGCAGAG GAAAGTCGGG  
141701 GAATGGCTAG TCATAGGTTG CATGATGATT TTAAATGGGT TTGTATCAGA  
141751 AAGGGGAAAA TACATACTCC TGTGTATGCC TCAGTCTTTA TCATAATTGG  
141801 CTGGTTCACA GCTAGCTCTT TGGGCCACAC GTGAAAGCAT TTGGACCTGG  
141851 CAACACCAGG CAGTTGCTGG TTATGGGTGT TCTAGGCTCA CTGCTACCTT  
141901 TTACAGAGTT CACGGGATTT TACGTAACCTA ACCCGCAGTG TGGATTTACC  
141951 AAAAGATCAC AGCACTAGCG GAGACTTCCA GAAACTGTCT CATGCTTTCT  
142001 GACCTCCAGG GAAAGTTGTA CCCACGACAT CCTCAACCAC TGGTACCATG  
142051 GAAGACCTGT CCCTGCCCAT TTCTCAAAAA TGCACAGCTC TTCCCTGCCT  
142101 GGAGCACATG AAGTCCCATC TCCCTGTCCC CAGACCTTTA GGCTCTGTTG  
142151 AAGTTCTGGC ATTGCTTATG AGACCCTTCC TGTCCAAGGA AGGTCTAAGT  
142201 CAACTCCTCC ATTGGACTGG AGATGAGGCT CACTGGTGAC ATCCTGTGTC  
142251 GACTCAGTAA TAAATAGTCA CTTGGGAGGC GATGTTTATG CAGGTGTGGA  
142301 TGTGAGTTT TACTATGGGA ATCATTCCAG CCTGACAAAA TGTGTTTAA  
142351 GGAATAGGTA GATAACTGGG ACTTCCTCTG TTATTCTAAC AAGTCGAAGC  
142401 TTCCTAATTA AACTGTCCAT GGATCTCACT TATTTGGTTT CCACTCTGTG  
142451 TTATCTGGTA CGTTCCTTGT AGCAGTGTGT TAAATTTCCA GGCCCTACGG  
142501 CCAAATCTGG CAGAGGCTTC CCTCTCATTT ATCCAGTGCC TTCTGTGGGC  
142551 CAGGCACAGG ATTAGGCACT TTATGAACGT CAGCTCATTT AAACCTCACG  
142601 ACACTATGTG GGAAGTATTT GCAAACCCAT TATATACACA AGGACACAGA  
142651 GGCTCAGGGA AGCTATGTTA TTTATCCAAT GGCACACAGC AAGAAAGTGG  
142701 TAGAGCTGGT ATTCAAAGTC TGACCAAAGT CTGCTTTCAA CTTCACTACA  
142751 GTGTCTGTGT CATGCATCCT TGTGATTGTG TGTGTTTGTG TGTATGTGTG  
142801 TCTTTCTAGC TTCATGGACA CAGCTTACAG ATGTGGGGAG CAGATATGGT  
142851 GGAATCTCCA CCACCAAGAG GGCACAAGGT CTTTGTGTAA ACATGGCTCA  
142901 AAGGGTTGCC CCTGCAGACA CCTACTGTAC ATTTATTTGG TTTTGAAAT  
142951 TTTGTATGTG GCACCCTTTA AAAAATGCCC TTTGAAAGCA CTCTTTTGCA  
143001 CTTTATCTGC TAACCTTGTG GAAACTCTGC ATACAGCAGG AATAAAATAG  
143051 TTCAAAGCAC TAAGCTGCAT ACTCTACCAA ATGGAACAGG TGCATGTGTT  
143101 GGTATGTGCA TAGATGCTTC CCCAAATGAG TCAAATCAGT CACACAGAGG  
143151 GATCAAACAT AACCTTGGGC TGGGGGTGGG AAAATTTTCT ACATAACCCA  
143201 TTCCCTGAGA CATTTGGCCA AGAATGTGAT GAACAAAATC AAAGAAGATC  
143251 CTCTATGGTG ATTGATCGAT TAAATATGTG TGCAAAGTGT TTAGAAACCT  
143301 ATGAAA (SEQ ID NO:3)

**FEATURES:**

Start: 3000  
Exon: 3000-3051  
Intron: 3052-62251  
Exon: 62252-62601  
Intron: 62602-84982  
Exon: 84983-85100  
Intron: 85101-98275  
Exon: 98276-98436  
Intron: 98437-133431  
Exon: 133432-133618  
Intron: 133619-137732

**FIGURE 3VV**



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

Exon: 137733-137875  
Intron: 137876-139687  
Exon: 139688-140305  
Stop: 140306

**CHROMOSOME MAP POSITION:**  
Bac accession #: AC026597  
Chromosome: 18

**ALLELIC VARIANTS (SNPs):**

DNA				Protein		
Position	Major	Minor	Domain	Position	Major	Minor
981	G	C	Beyond ORF (5')			
1012	C	T	Beyond ORF (5')			
1990	T	G	Beyond ORF (5')			
3432	C	T	Intron			
4658	T	C	Intron			
4772	G	A	Intron			
7738	A	C	Intron			
9118	T	A	Intron			
9192	A	G	Intron			
9222	G	A	Intron			
9734	G	T	Intron			
9795	A	G	Intron			
9853	A	C	Intron			
10397	G	A	Intron			
11198	G	T	Intron			
11470	G	T	Intron			
11534	G	C	Intron			
11540	T	G	Intron			
11557	C	G	Intron			
11708	A	C	Intron			
11953	C	T	Intron			
11967	T	C	Intron			
12172	A	C	Intron			
12188	G	A	Intron			
13472	-	T	Intron			
13781	A	C	Intron			
14031	A	G	Intron			
14110	T	C	Intron			
14248	A	G T	Intron			
14676	T	C A	Intron			
14981	C	T	Intron			
16365	A	G	Intron			
16827	G	A	Intron			
17599	A	T	Intron			
18093	A	G	Intron			
18226	G	C	Intron			
18467	-	T G	Intron			
18511	-	A T	Intron			
19107	G	A	Intron			
19223	A	G	Intron			
20102	T	C	Intron			
21946	G	T	Intron			
22240	T	C	Intron			
22679	A	G	Intron			
23178	T	C G	Intron			
23370	T	G	Intron			
23583	A	G	Intron			

FIGURE 3WW



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

24159	G	A	Intron
24307	C	T	Intron
24493	T	C	Intron
24822	C	T	Intron
24946	-	A	Intron
24947	-	A T	Intron
24959	T	C	Intron
25321	T	G	Intron
27280	C	T	Intron
28062	G	A	Intron
29033	G	C	Intron
29302	C	-	Intron
31093	T	C	Intron
31454	G	A	Intron
31834	A	G	Intron
31936	C	T	Intron
31947	A	T	Intron
31980	A	G	Intron
32156	T	G	Intron
32161	A	G	Intron
32436	A	G	Intron
32490	T	C	Intron
32526	G	A	Intron
32893	A	G	Intron
32900	G	T	Intron
33087	A	G	Intron
33474	C	G	Intron
33474	C	T G	Intron
33474	C	T G	Intron
33741	C	G	Intron
34043	G	A	Intron
34053	C	T	Intron
34297	A	C	Intron
37209	T	C G	Intron
37475	G	T	Intron
38476	A	G	Intron
38486	C	T	Intron
38576	A	G	Intron
38810	A	G	Intron
38825	A	C	Intron
39317	C	T	Intron
40519	A	G	Intron
41468	A	T G	Intron
41468	A	C G	Intron
41565	A	C	Intron
41625	A	T	Intron
41921	G	C T A	Intron
42152	C	A	Intron
42498	G	T	Intron
42715	T	G A C	Intron
42776	T	C A	Intron
43320	G	T C	Intron
43341	A	T	Intron
43424	A	G T	Intron
43509	A	G T	Intron
44584	C	T	Intron
46250	A	C T G	Intron
46287	C	T	Intron
46566	A	C T G	Intron
46653	G	A	Intron

FIGURE 3XX



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

47153	T	A	Intron
47171	C	T	Intron
47216	A	T	Intron
47484	T	C	Intron
47668	G	A	Intron
47698	C	T	Intron
48029	A	T	Intron
49334	A	G	Intron
49680	C	G	Intron
50056	A	G	Intron
51020	A	T G C	Intron
53750	G	T C	Intron
53753	A	T C G	Intron
53799	C	A T	Intron
53917	C	T G	Intron
54056	C	T	Intron
54402	G	A	Intron
54493	G	A T	Intron
54749	T	C	Intron
55396	-	C	Intron
55397	-	C	Intron
55703	A	C	Intron
55783	G	A	Intron
55806	A	C	Intron
57433	G	T	Intron
57699	T	A	Intron
60173	C	G A T	Intron
62216	C	A	Intron
62830	G	C	Intron
63395	G	A	Intron
64019	T	-	Intron
64030	T	-	Intron
64104	C	A G T	Intron
64166	G	T	Intron
64408	A	G	Intron
64786	C	T	Intron
65120	A	G C	Intron
65703	C	T	Intron
66930	C	G	Intron
66951	T	G	Intron
68094	G	A	Intron
68124	A	G	Intron
68787	A	G	Intron
69668	C	A	Intron
69701	A	C	Intron
69773	C	T	Intron
70257	-	T	Intron
70261	-	T	Intron
70268	-	T	Intron
70941	G	A T	Intron
71359	G	T	Intron
72550	C	T	Intron
75313	T	A	Intron
75541	G	T	Intron
75957	T	G	Intron
76415	A	C	Intron
77872	T	A	Intron
78058	A	C	Intron
79799	A	G	Intron
80598	G	A	Intron

FIGURE 3YY



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

82609	A	G T	Intron			
83645	A	G	Intron			
83756	C	T A	Intron			
84687	A	C	Intron			
84761	C	T	Intron			
84911	-	T	Intron			
84921	-	T	Intron			
85786	C	T	Intron			
85903	T	-	Intron			
85906	T	-	Intron			
85908	T	-	Intron			
85913	T	-	Intron			
85932	A	-	Intron			
86085	C	A	Intron			
86585	T	-	Intron			
86596	T	-	Intron			
86601	T	A	Intron			
89478	-	T	Intron			
89488	-	T	Intron			
91631	A	G	Intron			
91898	G	C	Intron			
93506	T	C	Intron			
94409	T	C	Intron			
94689	T	A	Intron			
94856	G	A	Intron			
95303	A	G	Intron			
95373	G	A	Intron			
95657	A	T	Intron			
96312	-	A	Intron			
96315	-	A	Intron			
96329	-	T A	Intron			
96370	C	T	Intron			
96372	C	T	Intron			
96439	T	C	Intron			
96468	G	A	Intron			
96501	A	G	Intron			
97217	A	G	Intron			
97449	A	G	Intron			
98167	A	G	Intron			
98430	G	C	Exon	225	V	V
98846	T	C A	Intron			
99326	C	A	Intron			
99514	C	T	Intron			
99680	G	A	Intron			
99879	T	C	Intron			
99971	A	G	Intron			
100895	G	A	Intron			
100927	G	C	Intron			
102805	G	A	Intron			
103462	G	T	Intron			
103811	G	A T	Intron			
105461	G	C	Intron			
105981	A	G	Intron			
106495	G	T	Intron			
107077	G	A	Intron			
107431	T	G	Intron			
107671	A	G	Intron			
108826	C	T	Intron			
111310	T	A	Intron			
112035	T	-	Intron			

FIGURE 3ZZ



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

112038	T	- A	Intron
112066	G	T	Intron
114098	G	A	Intron
114293	A	-	Intron
114413	-	C T	Intron
114414	-	C	Intron
114692	C	T	Intron
115696	A	T	Intron
116153	A	C	Intron
116213	G	A	Intron
116507	G	A	Intron
116796	G	T	Intron
117142	T	A	Intron
118270	G	C A	Intron
118495	C	T	Intron
119314	A	T	Intron
119740	T	C	Intron
119899	G	A	Intron
119990	G	A	Intron
120169	A	G	Intron
120519	C	T	Intron
120812	A	G	Intron
121053	T	C	Intron
121246	G	A	Intron
121475	C	T	Intron
121715	T	A	Intron
122390	C	A	Intron
122606	C	T	Intron
122767	T	C	Intron
122957	C	A	Intron
122963	G	A	Intron
124458	C	G	Intron
125449	G	A	Intron
126753	G	A	Intron
126957	-	T G	Intron
126962	A	-	Intron
128567	T	- C	Intron
128567	T	- C	Intron
128599	T	G	Intron
128843	G	A T	Intron
130388	T	C	Intron
131191	G	C	Intron
132702	C	T	Intron
133422	G	C	Intron
133447	C	A	Exon
133956	T	C	Intron
134132	C	T	Intron
136253	A	T	Intron
137206	G	T A	Intron
137313	C	A G	Intron
137335	G	A	Intron
137951	T	C	Intron
138206	G	C	Intron
138207	T	G	Intron
138210	-	G	Intron
138805	G	C	Intron
140339	-	T	Beyond ORF (3')
140340	-	G T	Beyond ORF (3')
140360	-	T	Beyond ORF (3')
140366	T	-	Beyond ORF (3')

233 Q K

FIGURE 3AAA



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

141183	A	G	Beyond ORF (3')
141545	A	T	Beyond ORF (3')
142316	C	T	Beyond ORF (3')
142436	T	C G	Beyond ORF (3')
142719	G	T	Beyond ORF (3')
142779	T	C	Beyond ORF (3')
142931	A	C	Beyond ORF (3')

Context:

DNA  
Position  
981

TTTGTTTGATTTCTATGTCTTAGCCATCCTCCCAGTCCTAGTAGAGAGAGGGCAAAGTGTG  
GTTACAGAGTCCAGGGAAGATGGTTCTGAAGCACCCGGGAACCTGCCTAAAGGGCTGAAG  
AGTCAGAGTAGCACCATCAGATTGGTACCAGTTTTCCTGAACGGGGTTTGACAGAGAATT  
CAGGGCTCCAGCCTGGGGTGCCTGTGACAGCCAGTGACAAAGCACTACCTTTCCACAC  
GACCACAGCGGACCTCTGTAGGTCTTGCTCTTGGACTCAGAAACCTTGATGTGATAGTGA  
[G, C]

GGATGGATGGTGAGAAAGATGCTGCTGACACAGGGCTCCCCAGAAGCCTCAAGGTGCCGT  
AGAGTAGCATGCAACTTAGAGATCAGCTGCTAGTGTGGGATTTTAGGACCCAGCTGGCA  
GGCATAGGAATGAGCTGGGCAATTCTATGCGTAAGTAAAGGCAACAACATCTAACAGG  
ACCTTATGGCACTAGATAGTAAGCCCCATGAAGGCAAGATCTCTGTCTTGTCTCTGCGCA  
TATGGCCAGCACATAGCACAGTGATGGCACTTGGAAAGGGTTCAATATATATGTTGAATG

1012 CCAGTCCTAGTAGAGAGAGGGCAAAGTGTGGTTACAGAGTCCAGGGAAGATGGTTCTGAAG  
CACCCGGGAACCTGCCTAAAGGGCTGAAGAGTCAGAGTAGCACCATCAGATTGGTACCAG  
TTTTGCCTGAACGGGGTTTGACAGAGAATTACAGGCTCCAGCCTGGGGTGCCTGTGACAGC  
CCAGTGACAAAGCACTACCTTTCCACAGACCACAGCGGACCTCTGTAGGTCTTGCTCT  
TGGACTCAGAAACCTTGATGTGATAGTGAGGGATGGATGGTGAGAAAGATGCTGCTGACA  
[C, T]  
AGGGCTCCCCAGAAGCCTCAAGGTGCCGTAGAGTAGCATGCAACTTAGAGATCAGCTGCT  
AGTGTGGGATTTTAGGACCCAGCTGGCAGGCATAGGAATGAGCTGGGCAATTCTATGC  
GTAAGTAAAGGCAACAACAATCTAACAGGACCTTATGGCACTAGATAGTAAGCCCCATGA  
AGGCAAGATCTCTGTCTTGTCTCTGCCATATGGCCAGCACATAGCACAGTGATGGCACT  
TGGAAAGGGTTCAATATATATGTTGAATGAACAACAATTTTAGTAACCTTATCTGGAAG

1990 CGCTTTCCTCCGGGGGCCCCCGTGCCTCTCTCAAGCCTCCTTTCCAGCCAACGACCAGCG  
GCCCCAGTCCGGCTGCAGGTAGCTGGGGAAGGGACCAAGCTGTGCCTTGGGAGCGAGCTT  
CCCCGGGCGGGGAGAGCGCAGCAGATGCGGAGCGGTCCAGAACAAAAGGCTCATGGCTG  
GCACGGGCCTCCTTGGAGTGCGGCGGGGACGTGGGTTCGGGACTCAGGCGAGAGAGCCAG  
ACGCGGGAGGAAAAAAATGAAGTGAGAAAAGAGAAGGAGGGAGAGCTCAGGGTGAGAGC  
[T, G]  
GTGAGAAGAGGTGACCCGGAGGCCGAGGTCTGCGGCGGAGCCGAGCGGCCCTTCCTCCG  
CCTCCTGCAGCGCCTTCAGGCAACCAAGCGTGTCTCCGGCTGCAACTCCAGCAAGCGCG  
CCGCTGCCGCTCCACGCCCCGCGCCGCGCCGAGCCAGTAAGTAGCGGCGCGCCCA  
CCGCTCGTTCCCCGCCCCCTCCGCGGCTTCCCCGCCACCGCCACCGCCTCCCGCCGCCCC  
GCGGGCAAGTCCGCGACCGCTCCCGCTGCCCCGAGCCGGGTGCCGGGGGCTCAGCGCGC

3432 TGCTTCTGGCAGCGTGTGTCTGAGGCTGGGAAATGCGCCTGGGAACTGCAGCGCGGGTG  
GGAGGAGGGCGGAGGCAGCGTGGGTCCGAACCCAGATAGTGCCTGTCATTACCACATAA  
TCATTGTCCCTCCTAGATTGTCTCAGATCTATTTAGATAGACCAAGCCGACTGTTGGT  
TTGAAATTGCAAGTGTGCGGTATTTGCTTTTGACTTTGAGTGTGCGAGTGTGTGTGTGT  
GTGTGTGTGTGTCTTTGTTTCTGGTGATCTTTGTCTCTCTGGCAGATGGGTGGGGTGCT  
[C, T]  
CCCCCTGGACCTGGAGCTGCGCCGATGCCCCGGGTGTCTCAGTGGGAAAGGTTTCTTGG  
CAGCAAGTGGGGCTCGAGTTGCAGCAGCCGTCCCTAGGGGTGGGCGGTTCTCGCAGGGCA  
TGCAGAATAATGGAGCCACAGGGCCTCCTGAGTCTTCGTTCAATCTTATTACCAACCT  
AGCAGCTAGTTAGGCTCAGGTCAGAGTAGAAGCAGGAGGAGGGGTGGTTTGTGAGAAGGG  
TGGGGCTGGCAAGGCATAGGGGAGGGGCACGAAGTGTGCCCGCCCAAGCAATGGTGTGGT

FIGURE 3BBB





Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

4658 AGTTTACAGTGAGGGAGACAGACCTAAATCAATTCCATGGAGGAATGCATAATTCAAAGT  
TTATGTATGCTCCAGGGAGAGCATCAGAGGTTTAAAGAAAGTGTCTGATAGAAGAGATTGA  
CAAGGACCAGAGAAGGCTTCCCTGAGGACATGACACTTGGACTTAGGCCTGGAGGATGTA  
TAGGAGTTAATTGTCTAAGGAGGAGGGGAATTGTTGCAGAAGAGGGAACAGCAAGTGCAA  
AGGGCCTGAGGCAGAAGAGGTATGTGTATATGATGAACTGAAAGGAGGTTCCCATGGCTA  
[T, C]  
GGCAGAGTGAGTGAAGAGGTATTGCCTTTTTTAAACACCCAGGCTGTTATACTGTAAATA  
CAGCAAAACCTTTCATTTTGTCTCTATTTGAAACCTCTGGAAATACGGAAGTGTGCCTT  
GGCTTCTTTTGGGAAATCCCTGAAAAATGTATTTATCCCTAGCAGAGAGCAAGAGGGCT  
TGTGTTTTGAGATATGACTGGGGATCCACAGGCGAGACGCCCCCTCCAAGCCCTGTGT  
TGTGAGGTGGGTAGCATTGTGGGGTTGGAAGAGTATAGTATTTATCTAAAGCCAATG

4772 GATTGACAAGGACCAGAGAAGGCTTCCCTGAGGACATGACACTTGGACTTAGGCCTGGAG  
GATGTATAGGAGTTAATTGTCTAAGGAGGAGGGGAATTGTTGCAGAAGAGGGAACAGCAA  
GTGCAAAGGGCCTGAGGCAGAAGAGGTATGTGTATATGATGAACTGAAAGGAGGTTCCTCA  
TGGCTACGGCAGAGTGAGTGAAGAGGTATTGCCTTTTTTAAACACCCAGGCTGTTATACT  
GTAAATACAGCACAAACCTTTCATTTTGTCTCTATTTGAAACCTCTGGAAATACGGAAGT  
[G, A]  
TGCCTTGGCTTCTTTTGGGAAATCCCTGAAAAATGTATTTATCCCTAGCAGAGAGCAAG  
AGGGCTTGTGTTTTGAGATATGACTGGGGATCCACAGGCGAGACGCCCCCTCCAAGCC  
CTGTGTTGTTGGAGGTGGGGTAGCATTGTGGGGTTGGAAGAGTATAGTATTTATCTAAAG  
CCATGAAGAGTTTCAAGACGAGGAGTGACATGATTTGAGCTAAGTTTCAAAACAAGTGC  
TGTGTGGCTCTTGTGGATGTAGGGGACCAGATACAATGGTAGCATGGGCCAGGGTGGTTG

7738 TTCTCTGTCTTGTATTATGCCATAACCCAGTGCCCTGGAAAGTGCCTGGCACTCAATAA  
CCCTTTGCTGAATGAATGGAAGTTGGCAGGATGGACTGGAGAGGACTGAAGGCTTTATG  
CCTCATGGAATTCAGGACGCCCTCTCAGCTATAAATGGCAAAGTACAAATAAGGAGAA  
GGAAGAATATCCCCAAATAGTGGCATATCAGAAAGGACGCTGATATTCCTTCTTGC  
AAGCTCCAGCTCGCTCTAAACCTCCAGTGCGCTGTTTTCTTCTTTCTCGTCTTTGACC  
[A, C]  
GAAGTAAGAAGGCTGAATAGAAGTGCAAGTGAGGGTGGATGGGTGGACTGATCTAGCCTGC  
TGAAGATATGGTCAGTGTCCAATAAATAATTTGGCTCATATTAGCTATTGGAGTGTGGCT  
ATTTTTAGGCACTTTAATCCACTTAAGAAAGAAGCAAAGCTCTAGGAGTGGAGGTGGATT  
TTTTTTAAATGCTACACTTTTAGTGACACTTTAATGCAAAATTCTGGAGAAGCCATA  
CCTTATGTGCATAGCACCTTTTCAGTTTACAGAACACTTTTATAGGAATGATCTCATTGTGA

9118 ACATCTGTACTTTGGCTCCATATGAACCCACCTTAAATCTGATGCATTTAAAAATATA  
ATATAGTCTTTCCCTCATTAGGAACTTCAACCACAACTGAGATATGGTGTGAAGTATA  
TTTAATATAGGCACAGTGAGCTAGTGATTTCTTTTACTTTTAGTCTACAGGAAATTAG  
AGGAAGAGTTTAATGATAAAATGGAAAGAAGCCATTCTACTGATAGCCAGTTAGGAAGTT  
TCAGTTTGGACAGCTCCCTTGGCTGATGCAGAAAGGTGGATAAAAAATGACAATCTTTTTC  
[T, A]  
GTACTCTGATTCTTATAAAGGGCACCTACTGGATGATCCAGATGAGGTTAGAGTGAGTTA  
GGGGCTTAGCTCTACATGGCATGTTACAGAATCTACCTAACCGTGGCACTAGGAGTGTG  
GTCACCTGTTGGTTCCACCCACCTGGGTGATTTCTCTCCATAAGAATCATGGAGGTCAA  
AGGGACCTTCCACTTCTGGGTCTGGTCTAGGGGTACTCTCAGCGGAGACTTTACAGTT  
TATCTATGTCTGGCTCATTACCATCACCTACAATGGGGAAATAAAGACCTCATATTTACT

9192 CTCATTAGGAACTTCAACCACAAGTGAATATGGTGTGAAGTATATTTAATATAGGCAC  
AGTGAGCTAGTGATTTCTTTTACTTTTAGTCTACAGGAAATTAGAGGAAGAGTTTAAT  
GATAAAATGGAAGAAGCCATTCTACTGATAGCCAGTTAGGAAGTTTCAGTTTGGACAGC  
TCCCTTGGCTGATGCAGAAAGGTGGATAAAAAATGACAATCTTTTCTGTACTCTGATTCT  
TATAAAGGGCACCTACTGGATGATCCAGATGAGGTTAGAGTGAGTTAGGGGCTTAGCTCT  
[A, G]  
CATGGCATGTTTACAGAATCTACCTAACCGTGGCACTAGGAGTGTGGTCAACCTGTTGGT  
TCCACCCACCTGGGTGATTTCTCTCCATAAGAATCATGGAGGTCAAAGGGACCTTCCACT  
TCTGGGTCTGGTCTAGGGTACTCTCAGCGGAGACTTTACAGTTTATCTATGTCTGGC  
TCATTACCATCACCTACAATGGGGAAATAAAGACCTCATATTTACTTGCTAGAACATCTA  
TTTGTCAATTTGCAGCCACAGTTTAAAGAGTTTTTTTTTCTCCCTGTGAGTGTCTAGGACT

FIGURE 3CCC



9222

TATGGTGTGAAGTATATTTAATATAGGCACAGTGAGCTAGTGATTTCCTTTTGACTTTTA  
GTCTACAGGAAATTAGAGGAAGAGTTTAATGATAAAATGGAAAGAAGCCATTCTACTGAT  
AGCCAGTTAGGAAGTTTCAGTTTGGACAGCTCCCTTGGCTGATGCAGAAAGGTGGATAAA  
AATGACAATCTTTTCTGTACTCTGATTCTTATAAAGGGCACCTACTGGATGATCCAGAT  
GAGGTTAGAGTGAGTTAGGGGCTTAGCTCTACATGGCATGTTTACAGAATCTACCTAACC  
[G, A]  
TGGCACTAGGAGTGTGGTCACCCTGTGGTTCCACCACCTGGGTGATTTCTCTCCATAA  
GAATCATGGAGTCAAAGGGACCTTCCACTTCTGGGGTCTGGTCCTAGGGGTACTCTCAG  
CGGAGACTTTACAGTTTATCTATGTCTGGCTCATTACCATCACCTACAATGGGGAAATAA  
AGACCTCATATTTACTTGCTAGAACATCTATTTGTCATTTGCAGCCACAGTTTAAGAGTT  
TTTTTTTTCTCCCTGTGAGTGTCTAGGACTGAGTACTCTGAATTGAAAATGAAACCTGAC

9734

TTGTCAATTTGCAGCCACAGTTTAAGAGTTTTTTTTTTCTCCCTGTGAGTGTCTAGGACTG  
AGTACTCTGAATTGAAAATGAAACCTGACTTCCTAATCCTCCATTAGGGTTGAAGGGAG  
GGAGTAAGGGTCATAATCACTGGCAGGGGAGGGCACGGTCATGAGGGAGCATTGCATTCT  
TTTCCTTTGCCATTCCCAGAGCCAGGGAGATGGGGAGGGGTGGGCATTGGAGGTAGTGGG  
GATGAGGCTGGGAGATGGATGGGATTTAGGATTTAGGTTTGTATTACCAATAACT  
[G, T]  
CTAGTCTCATCACTTACCCTTTCCATGGAAGTAACCTTTGAAGCAGAGTGGAATGGTGGGG  
AAACAAGATTAGAAAGGAAAACATAGGATTTACTGCCATACATAAGCCAGGTGATCACAG  
GGAACTTTTCTTCATTCTCCCGTCCTTCTTTTCTTCATTCCCTTGTTCCCTCCCAACC  
GCCATCCCCCAAATCCTGCAGAGTCTTGATCTCAATTGCTCTCGCTTGTGCAAAGGGTC  
CTTCTCCCTTACTCAACTACCCAGTGTGGTGGGGCTGGTGGTATTACAGTTTAAAAAG

9795

GTACTCTGAATTGAAAATGAAACCTGACTTCCTAATCCTCCATTAGGGTTGAAGGGAGG  
GAGTAAGGGTCATAATCACTGGCAGGGGAGGGCACGGTCATGAGGGAGCATTGCATTCTT  
TTCTCTTTGCCATTCCCAGAGCCAGGGAGATGGGGAGGGGTGGGCATTGGAGGTAGTGGG  
ATGAGGCTGGGAGATGGATGGGATTTAGGAGATTTAGGTTTGTATTACCAATAACTG  
CTAGTCTCATCACTTACCCTTTCCATGGAAGTAACCTTTGAAGCAGAGTGGAATGGTGGG  
[A, G]  
AACAAGATTAGAAAGGAAAACATAGGATTTACTGCCATACATAAGCCAGGTGATCACAGG  
GAACTTTTCTTCATTCTCCCGTCCTTCTTTTCTTCATTCCCTTGTTCCCTCCCAACC  
CCATCCCCCAAATCCTGCAGAGTCTTGATCTCAATTGCTCTCGCTTGTGCAAAGGGTCC  
TTTCTCCCTTACTCAACTACCCAGTGTGGTGGGGCTGGTGGTATTACAGTTTAAAAAGA  
GTTGCTTGAATAGAAAATGAAAATTTGGTGGGTGATGGAGAGCCTGGAAGTCACGGTAA

9853

GGGAGTAAGGGTCATAATCACTGGCAGGGGAGGGCACGGTCATGAGGGAGCATTGCATTCT  
TTTTCTTTGCCATTCCCAGAGCCAGGGAGATGGGGAGGGGTGGGCATTGGAGGTAGTGG  
GGATGAGGCTGGGAGATGGATGGGATTTAGGAGATTTAGGTTTGTATTACCAATAAC  
TGCTAGTCTCATCACTTACCCTTTCCATGGAAGTAACCTTTGAAGCAGAGTGGAATGGTGG  
GGAAACAAGATTAGAAAGGAAAACATAGGATTTACTGCCATACATAAGCCAGGTGATCAC  
[A, C]  
GGGAACTTTTCTTCATTCTCCCGTCCTTCTTTTCTTCATTCCCTTGTTCCCTCCCAAC  
CGCCATCCCCCAAATCCTGCAGAGTCTTGATCTCAATTGCTCTCGCTTGTGCAAAGGGT  
CCTTCTCCCTTACTCAACTACCCAGTGTGGTGGGGCTGGTGGTATTACAGTTTAAAAA  
GAGTTGCTTGAATAGAAAATGAAAATTTGGTGGGTGATGGAGAGCCTGGAAGTCACGGT  
AACCTTTGCAGACGCCTAAAACACCAATATTACATAATTTGACATGCAAGCTAGCAACAA

10397

CTTTGCAGACGCCTAAAAACCAATATTACATAATTTGACATGCAAGCTAGCAACAATTT  
TACTACCAAGAAAATGAGTTTCTTATGTGCAAGCAGAACTCGAGATCCCCTAAATAATCA  
CACACCAAAATATTTAGCATGATAAAGATAAATAGTATAGCTTACTAAATTTAATGTGATA  
TGAGCCTGACAGGCAGAATAGAGATGCTTGATATTAGGTGTGATAAAGGTTTGACATCC  
AACATTCACTTACTTCGTCTCTGAGACAAAAGTCAGGCACCAAGTGTTTAAGAAAAATT  
[G, A]  
ATGGGAGGAAAAGCTTAGAGATGAATAAAGTCTATTTATTAATTTATATTTTCTCTGAG  
AACTGGGGAGTGTGTTACCCATGTTAACTGTGGACTAACCTGGGCCAGCTCCTGGATTCT  
TACTGGCTAAGAATGTTGCTTTAGGCCAAAGGAATTTATCCCTCATGGTGAATTTGAGG  
CCATATGGGAGGTGATTATGATAGATCTGTTTCGGCTCTACATTCTTACAATAACCTGA  
AAGGAGATTAAATACATGTTATAGTCATTTAACCTAGACTCCAGGCAAAATGTCACCCTC

FIGURE 3DDD



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

11198 TCTTCATCTGCAAGATAGGGATAATTACAGCCATTACTTCTTTGGTTTGTTATGTGGATT  
ACATAAAGTGATACATGCAAAGCTCTTAGAAGAATGCCGGATCATCATGAAGGCTCCATG  
AGTGGTACCTGCCTTGCTGTTCTCACAGTTGCAGGAGGCAGCCTGTGAAGTCAGGGTA  
GCCTCCAGCTCAGCCTCTTGAAGCATCTGGTTCAGTGTCTGGATCATCCAGGAAGTGGT  
CCATAGCAGAGCACAAACCCTCCTGATACTCTGGAAGACTCTTAGTATTCTTAGTTCAGAT  
[G, T]  
TAAACAACCTAGGCTGTCTGGTTAACTCAGAGAAAAGACCAGTGAAAGAACATGGCTTG  
GAATCACAATATTTGAGTCTGAGTTAATGTACCCATTTTATTAGCAGTGTATCATAGTTG  
ATTTTCGGCTGCTTTAATAAAATTCCATAAACTAGATAGATTATAGACAACAGAAATTTAT  
TTCTCACTGTTCTGGAGGCTGGGAGGTCCAAGATCAAGGCACTGGTAGATTGGGCATCTG  
GTGAGGGCCCACTTTTCAGCTCATAGATGGTGCCTTCTTGCTGTCTTACACGGTAGA

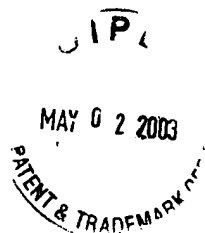
11470 GAAGACTCTTAGTATTCTTAGTTCAGATGTAAACAACCTAGGCTGTCTGGTTAACTCAG  
AGAAAAGACCAGTGAAAGAACATGGCTTGAATCACAATATTTGAGTCTGAGTTAATGTA  
CCCATTTTATTAGCAGTGTATCATAGTTGATTTTCGGCTGCTTTAATAAAATTCCATAAAC  
TAGATAGATTATAGACAACAGAAATTTATTTCTCACTGTTCTGGAGGCTGGGAGGTCCA  
GATCAAGGCACTGGTAGATTGGGCATCTGGTGAGGGCCCACTTTTCAGCTCATAGATGGT  
[G, T]  
CCTTCTTGCTGTCTTACACGGTAGAAAAAGTGATGGGTCTTTCTTGGGCTTCTTTGA  
TAACTGCACGAATCCTAATCATGAAGGCTCCATGCCCATGACCTAATTACCTTCCAAAGG  
CCCCATCTCCTAATAACATTACCTTTGGGGTTAGGATTTCAACATATGAATTTCTGGGGG  
ACACATTCAGACCATAACACTGTGTGAACCTTGGCCAAGTCACCTAACCTTTCTTAGCATT  
AGTTTTCTTTGGGTAAAATAAAGATCACAATAACAACCACTTCACAGTTGCTGAGATGA

11534 AAGACCAGTGAAAGAACATGGCTTGAATCACAATATTTGAGTCTGAGTTAATGTACCCA  
TTTTATTAGCAGTGTATCATAGTTGATTTTCGGCTGCTTTAATAAAATTCCATAAACTAGA  
TAGATTATAGACAACAGAAATTTATTTCTCACTGTTCTGGAGGCTGGGAGGTCCAAGATC  
AAGGCACTGGTAGATTGGGCATCTGGTGAGGGCCCACTTTTCAGCTCATAGATGGTGCCT  
TCTTGCTGTCTTACACGGTAGAAAAAGTGATGGGTCTTTCTTGGGCTTCTTTGATAA  
[G, C]  
TGCACGAATCCTAATCATGAAGGCTCCATGCCCATGACCTAATTACCTTCCAAAGGCCCC  
ATCTCCTAATAACATTACCTTTGGGGTTAGGATTTCAACATATGAATTTCTGGGGGGACAC  
ATTTCAGACCATAACACTGTGTGAACCTTGGCCAAGTCACCTAACCTTTCTTAGCATTAGTT  
TTCTTTTGGGTAAAATAAAGATCACAATAACAACCACTTCACAGTTGCTGAGATGATCAA  
ATGAGACAAATGTGAATAAACTTCATAAACTGTTAAATTCAGACCAACATTTCCCAAAA

11540 AGTGAAAGAACATGGCTTGAATCACAATATTTGAGTCTGAGTTAATGTACCCATTTTAT  
TAGCAGTGTATCATAGTTGATTTTCGGCTGCTTTAATAAAATTCCATAAACTAGATAGATT  
ATAGACAACAGAAATTTATTTCTCACTGTTCTGGAGGCTGGGAGGTCCAAGATCAAGGCA  
CTGGTAGATTGGGCATCTGGTGAGGGCCCACTTTTCAGCTCATAGATGGTGCCTTCTTGC  
TGTGTCCTTACACGGTAGAAAAAGTGATGGGTCTTTCTTGGGCTTCTTTGATAACTGCAC  
[T, G]  
AATCCTAATCATGAAGGCTCCATGCCCATGACCTAATTACCTTCCAAAGGCCCCATCTCC  
TAATAACATTACCTTTGGGGTTAGGATTTCAACATATGAATTTCTGGGGGGACACATTCAG  
ACCATAACTGTGTGAACCTTGGCCAAGTCACCTAACCTTTCTTAGCATTAGTTTCTTT  
TGGGTAAAATAAAGATCACAATAACAACCACTTCACAGTTGCTGAGATGATCAAATGAGA  
CAAATGTGAATAAACTTCATAAACTGTTAAATTCAGACCAACATTTCCCAAAATGTGTT

11557 TGAATCACAATATTTGAGTCTGAGTTAATGTACCCATTTTATTAGCAGTGTATCATAGT  
TGATTTTCGGCTGCTTTAATAAAATTCCATAAACTAGATAGATTATAGACAACAGAAATTT  
ATTTCTCACTGTTCTGGAGGCTGGGAGGTCCAAGATCAAGGCACTGGTAGATTGGGCATC  
TGGTGAGGGCCCACTTTTCAGCTCATAGATGGTGCCTTCTTGCTGTCTTACACGGTA  
GAAAAGTGATGGGTCTTTCTTGGGCTTCTTTGATAACTGCACGAATCCTAATCATGAAG  
[C, G]  
CTCCATGCCCATGACCTAATTACCTTCCAAAGGCCCCATCTCCTAATAACATTACCTTTG  
GGGTAGGATTTCAACATATGAATTTCTGGGGGGACACATTAGACCATTAACACTGTGTGA  
ACTTGGCCAAGTCACCTAACCTTTCTTAGCATTAGTTTCTTTTGGGTAAAATAAAGATC  
ACAATAACAACCACTTCACAGTTGCTGAGATGATCAAATGAGACAAATGTGAATAAACTT  
CATAAACTGTTAAATTCAGACCAACATTTCCCAAAATGTGTTCTGTGAGACATAAGCTA

FIGURE 3EEE



- 11708 AAGATCAAGGCACTGGTAGATTTGGCATCTGGTGAGGGCCAC'TTTTCAGCTCATAGATG  
GTGCCTTCTTGCTGTGTCTTACACGGTAGAAAAAGTGATGGGTCTTTCTTGGGCTTCTT  
TGATAACTGCACGAATCCTAATCATGAAGGCTCCATGCCCATGACCTAATTACCTTCCAA  
AGGCCCCATCTCCTAATAACATTACCTTTGGGGTTAGGATTTCAACATATGAATTCTGGG  
GGGACACATTAGACCATAACACTGTGTGAAC'TTGGCCAAGTCACCTAACCTTTCTTAGC  
[A, C]  
TTAGTTTCTTTTGGGTAAAATAAAGATCACAATAACAACCACTTCACAGTTGCTGAGAT  
GATCAAATGAGACAAATGTGAATAAACTTCATAAACTGTTAAATTCAGACCAACATTTTC  
CCAAAATGTGTTCTGTGAGACATAAGCTAGACTCATCAGATACTCTGAGAAGAAAAGTGG  
TGTCATGGTAAAGTCAGTTTGCAGGATGATACGTGCTCAGTCATTCTAGAGAGTCATCA  
TGCACGTTAGCATGTTACTGTATTATTGTGTAACAAATAACCCCAACATTTAGTGGCTTA
- 11953 ACATTCAGACCATAACACTGTGTGAAC'TTGGCCAAGTCACCTAACCTTTCTTAGCATTAG  
TTTTCTTTTGGGTAAAATAAAGATCACAATAACAACCACTTCACAGTTGCTGAGATGATC  
AAATGAGACAAATGTGAATAAACTTCATAAACTGTTAAATTCAGACCAACATTTCCCAA  
AATGTGTTCTGTGAGACATAAGCTAGACTCATCAGATACTCTGAGAAGAAAAGTGGTGT  
ATGGTAAAGTCAGTTTGCAGGATGATACGTGCTCAGTCATTCTAGAGAGTCATCATGCA  
[C, T]  
GTTAGCATGTTACTGTATTATTGTGTAACAAATAACCCCAACATTTAGTGGCTTAAATCA  
ATATAAACATTTATTATCTCATAAGTTCTGTGGATCAATAATTCAGGGATAGTTTAAATTG  
GGTGGTCTGACTAGGAGTCTGTCTATTGATTGTGGTCAGATGTTGTCCGGGCTGCTGTCT  
CTGATGGCTTGACTGGGGCAGGAGGATCTGTTTCCAAGATGGTGTGCTCATGTGGCTTGC  
AAATTGCTGCTGGTTGTTGGGGAGAGGGCTCATTTCTGCCAATGTGGGCCTGTCCATGG
- 11967 ACACTGTGTGAAC'TTGGCCAAGTCACCTAACCTTTCTTAGCATTAGTTTCTTTTGGGT  
AAATAAAGATCACAATAACAACCACTTCACAGTTGCTGAGATGATCAAATGAGACAAATG  
TGAATAAACTTCATAAACTGTTAAATTCAGACCAACATTTCCCAAATGTGTTCTGTGA  
GACATAAGCTAGACTCATCAGATACTCTGAGAAGAAAAGTGGTGTGATGGTAAAGTCAGT  
TTGCAGGATGATACGTGCTCAGTCATTCTAGAGAGTCATCATGCACGTTAGCATGTTAC  
[T, C]  
GTATTATTGTGTAACAAATAACCCCAACATTTAGTGGCTTAAATCAATATAAACATTTAT  
TATCTCATAAGTTCTGTGGATCAATAATTCAGGGATAGTTTAAATTGGTGGTCTGACTAG  
GAGTCTGTCTATTGATTGTGGTCAGATGTTGTCCGGGCTGCTGTCTCATGTGGCTTGACT  
GGGGCAGGAGGATCTGTTTCCAAGATGGTGTGCTCATGTGGCTTGCAAATTGCTGCTGGT  
TGTTGGGGAGAGGGCTCATTTCTGCCAATGTGGGCCTGTCCATGGGATGCTTATGTGTA
- 12172 TCTGAGAAGAAAAGTGGTGTGATGGTAAAGTCAGTTTGCAGGATGATACGTGCTCAGTCA  
TTCTTAGAGAGTCATCATGCACGTTAGCATGTTACTGTATTATTGTGTAACAAATAACCC  
CAACATTTAGTGGCTTAAATCAATATAAACATTTATTATCTCATAAGTTCTGTGGATCAA  
TAATTCAGGGATAGTTTAAATTGGGTGGTCTGACTAGGAGTCTGTCTATTGATTGTGGTCAG  
ATGTTGTCCGGGCTGCTGTCTGATGGCTTGACTGGGGCAGGAGGATCTGTTTCCAAG  
[A, C]  
TGGTGTGCTCATGTGGCTTGCAAATTGCTGCTGGTTGTTGGGGAGAGGGCTCATTTCTCTG  
CCAATGTGGGCCTGTCCATGGGATGCTTATGTGTACTCATATGTGACATGGTGGCTGGCT  
TCCCAAGAACAAGTGATTCAAGAGAGAACAAGGTGGAATTGGCAACACTTTTTATGACT  
TAAC'TTCAAAAATCACATATTGTTACCACCACCACGTTCTTTTCATTAGACGCCAGTCAC  
TAAAGTTAGTCCACATCTGGGGAGTGGTGGGGTGATCACATTACGTTGGAAGGGAGAC
- 12188 GTGTCATGGTAAAGTCAGTTTGCAGGATGATACGTGCTCAGTCATTCTAGAGAGTCATC  
ATGCACGTTAGCATGTTACTGTATTATTGTGTAACAAATAACCCCAACATTTAGTGGCTT  
AAATCAATATAAACATTTATTATCTCATAAGTTCTGTGGATCAATAATTCAGGGATAGTT  
TAATTGGGTGGTCTGACTAGGAGTCTGTCTATTGATTGTGGTCAGATGTTGTCCGGGCTGC  
TGTCATCTGATGGCTTGACTGGGGCAGGAGGATCTGTTTCCAAGATGGTGTGCTCATGTG  
[G, A]  
CTTGCAAATTGCTGCTGGTTGTTGGGGAGAGGGCTCATTTCTGCCAATGTGGGCCTGTG  
CATGGGATGCTTATGTGTACTCATATGTGACATGGTGGCTGGCTTCCCAAGAACAAGTG  
ATTCAAGAGAGAACAAGGTGGAATTGGCAACACTTTTATGACTTAACTTCAAAAATCAC  
ATATTGTTACCACCACCACGTTCTTTTCATTAGACGCCAGTCAC'TAAAGTTAGTCCACAT  
CTGGGGAGTGGTGGGGTGATCACATTACGTTGGAAGGGAGACATGTCAAAGAATTTGA

FIGURE 3FFF



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

13472 GTCCCTTCTTTTACAGATTGAGTACTGACAACCTTAACCTTCTTGGGTAAAGCCAGAAAA  
AACAGGATGGCCTCCAGGCCGAGCAGTAGAAATGCTGGGGAATGGGGTGTCTGGTGTGTG  
TCTGGTGTGTTTCTGCAGTGCCTGCAGGCCATGTGTCTGTATGGTGACTGAAACGCAAGT  
CGGCATCCAGCCAGGATGGCAGGGACCGTGTGCCTGGGGGTGACGGCAAACACACAGTGA  
GAAGCTGCTGATGGAGGGAGGACCGTTAGCACTCCTTGTATATTTTGAGTAAACATTTT  
[-, T]  
TTACAATCTTGTGTGCTTTTCTGTACAGTCTTGAGAAAATGATTTCCAGGAAGCAGGATG  
CATCCAATGACTTAGAGGTTCCCATGTTTCCAAACATTACATGCCTGGCTTATTCCTGAG  
GCAGTTTGTATTCTGAAGGAAGTTTGGAGCTTCTGTGTTCTGGGCAGAGGCGAGTGAA  
TATGGTTTCTTTTGTAGTACACCGTGGACTTGAGAATGATCAGGAGCTGGACATTGTTGA  
ATATGTCACCTTACTGCACAAAATGGCAAAGACAGGGTCTGGGACAGGGTGAGAGTGTGTT

13781 TTGTTGCTTTTTCTGTACAGTCTTGAGAAAATGATTTCCAGGAAGCAGGATGCATCCAAT  
GACTTAGAGGTTCCCATGTTTCCAAACATTACATGCCTGGCTTATTCCTGAGGCAGTTTT  
GTATTTCTGAAGGAAGTTTGGAGCTTCTGTGTTCTGGGCAGAGGCGAGTGAATATGGTTT  
CTTTTGTAGTACACCGTGGACTTGAGAATGATCAGGAGCTGGACATTGTTGAATATGTCA  
CTTACTGCACAAAATGGCAAAGACAGGGTCTGGGACAGGGTGAGAGTGTGTTGAATGGAG  
[A, C]  
TGCTTGGGGCCCCAGTCACATTCAGGAGCCAGCACTGATGGCATCTGTAACCATAGTAAC  
CAAGAGTGGAAAAAGTCTCAGGATGCCAAGACGCCACTGTGCCCCCTTCTGGTTCTGTT  
GTTTTCCCCTCTATTCTTTCATCCAGAAATCCCCATCCCTGCCCCCAACCACCTGAC  
AAGGACTGACTTTCAGGGTGGTTTCTACACTGGTGATTTTAACTTCTACTAACTCAAC  
ACTTCTGTAGCCCCCTTTTTCAGTTCTGAGATCCACAAGGATTCTTATGATCCAGACTA

14031 AAAATGGCAAAGACAGGGTCTGGGACAGGGTGAGAGTGTGTTGAATGGAGATGCCTGGGG  
CCCCAGTCACATTCAGGAGCCAGCACTGATGGCATCTGTAACCATAGTAACCAAGAGTGG  
AAAAAGTCTCAGGATGCCAAGACGCCACTGTGCCCCCTTCTGGTTCTGTTGTTTTCCCC  
TCTATTTCTTTTCATCCAGAAATCCCCATCCCTGCCCCCAACCACCTGACAAGGGACTG  
ACTTTCAGGGTGGTTTCTACACTGGTGATTTTAACTTCTACTAACTCAACACTTCTGT  
[A, G]  
GCCCTTTTTCTAGTTCTGAGATCCACAAGGATTCTTATGATCCAGACTAAGCCTCATGC  
ACCTAATTTCTTCCGCTTTTCCATTTTACTGTGAAAATTGGTCCTAAGTCCTGTAGTAT  
ACATACTCTAGACTTATTTACAGCTGGGCATAACAACGGTGGCTCATGGCACTCAAAGTT  
TCCAGTAACACTCCTGCACTCACAGTCTGGTATAGATCATGAGATTTTTTAGATGTGTT  
TTAAATGAACAGAGAAAGGCAATGAGGCACAGGAAAGAGAGCCGTGGTCTCTTGTGTTGGA

14110 CCAGCACTGATGGCATCTGTAACCATAGTAACCAAGAGTGGAAAAAGTCTCAGGATGCCA  
AGACGCCACTGTGCCCCCTTCTGGTTCTGTTGTTTCCCCTCTATTCTTTTCATCCAGAA  
ATTTCCCCATCCCTGCCCCCAACCACCTGACAAGGGACTGACTTTCAGGGTGGTTTCTA  
CACTGGTGATTTTAACTTCTACTAACTCAACACTTCTGTAGCCCCCTTTTTCAGTTCTG  
AGATCCACAAGGATTCTTATGATCCAGACTAAGCCTCATGCACCTAATTTCTTCCGCTT  
[T, C]  
TCCATTTTTACTGTGAAAATTGGTCCTAAGTCCTGTAGTATACATACTCTAGACTTATTT  
ACAGCTGGGCATAACAACGGTGGCTCATGGCACTCAAAGTTTCCAGTAACACTCCTGCAC  
TCACAGTCTGGTATAGATCATGAGATTTTTTTAGATGTGTTTTAAATGAACAGAGAAAGG  
CAATGAGGCACAGGAAAGAGAGCCGTGGTCTCTTGTGTTGGAGATGTGGGTTTTGCTACTG  
GTTGGAAAGTGAGGTGTGGCATGGCGCATGAGGGTGGGGAGAGGTGGGTGATGCTCAGGT

14248 CCAACCACCTGACAAGGGACTGACTTTCAGGGTGGTTTCTACACTGGTGATTTTAACTT  
CTACTAACTCAACACTTCTGTAGCCCCCTTTTTCAGTTCTGAGATCCACAAGGATTCTAT  
TATGATCCAGACTAAGCCTCATGCACCTAATTTCTCCGCTTTTCCATTTTACTGTGAA  
AATTTGGTCTAAGTCTGTAGTATACATACTCTAGACTTATTTACAGCTGGGCATAACAA  
CGGTGGCTCATGGCACTCAAAGTTTCCAGTAACACTCCTGCACTCACAGTCTGGTATAGA  
[A, G, T]  
CATGAGATTTTTTTAGATGTGTTTTAAATGAACAGAGAAAGGCAATGAGGCACAGGAAAG  
AGAGCCGTGGTCTCTTGTGTTGGAGATGTGGGTTTTGCTACTGGTTGGAAAGTGAGGTGTG  
GCATGGCGCATGAGGGTGGGGAGAGGTGGGTGATGCTCAGGTCTAGGGCATAGTAGG  
TCTTACTTACTAAGGAACTCTTTTTTCTGAGAATAACAGGAATGTCTTGATTGATTGGA  
AGTGGGAGGATGACACAATCAGATTTTTTAAAGATTATTTAAATCGCTAATAAATCAAAT

FIGURE 3GGG



14676 GCATGAGGGTGGGGAGAGGTGGGTGATGCTCAGGTCATGTAGGGCATAGTAGGTCTTACT  
TACTAAGGAACCTTTTTTCTGAGAATAACAGGAATGTCTTGATTGATTTGAAGTGGGA  
GGATGACACAATCAGATTTTTTAAAGATTATTTAAATCGCTAATAAATCAAATGATGGGT  
TCAGCGAATGTTTGCAGAGGATACTTACTGTGTGACAGGCATAGTCTGGCCTTACCTGG  
GGTATCTGTGTATTCTTGTAGGAATCCTACATAAAAGCTGTTAAATATTTTAAACAGAAA  
[T, C, A]  
AAGCTTTTCTTGACATCTTTGAATTATGACAACCAATTCCAAACTTCTGGTTGCAAATGG  
GAGGTGTATCTTAAAGCAATGGCGATTGCATTTTCAATTTCTGTTCAATAAATGATATT  
TTCCCTGGCTTTGTACATGACCCTTGATTCTGTGATAAATTGCATATCTAGAGTCGATG  
AATCAATACATGCAAACTGTGGTGCCTCGCTCATATTCTGTTATACTTCAGACGCCTT  
TTGGAAGCATGTGGCTCTCAGTTCAGCATAATGCTCCTGATAAAATTGCCCTCCATAC

14981 TTTTCTTGACATCTTTGAATTATGACAACCAATTCCAAACTTCTGGTTGCAAATGGGAGG  
TGTATCTTAAAGCAATGGCGATTGCATTTTCAATTTCTGTTCAATAAATGATATTTC  
CTGGCTTTGTTACATGACCCTTGATTCTGTGATAAATTGCATATCTAGAGTCGATGAATC  
AATACATGCAAACTGTGGTGCCTCGCTCATATTCTGTTATACTTCAGACGCCTTTTGG  
AAGCATGTGGCTCTCAGTTCAGCATAATGCTCCTGATAAAATTGCCCTCCATACCCGC  
[C, T]  
GTCACTTTGTTCTCGGTGTGTCCAGAGGTATTGTAACATTGGGGTATTTCTCCTTTGACT  
CTAATGGGACCCCTGCTAGTTGTGTTCTTGTGGCCTCAGCTTGAAGGCCTCCCAAAG  
CCTGAATTAAGCAAGCTTCTGATGTGCCGATCCCTTTCTCTGGCAGGGTGAGAAGCAG  
TTTCTATAGGAGCGTGAATGCCTGCTGCTCAGGCAATAATCTCTGCATTACAGCCTCAGTA  
CTAAAGACAGGCAGAGCAGACAGCCACAGGGGGTGGGATTTGAGGAGCCCTATAAAGTCC

16365 CAAAAAGAGGACAAAGCATATCTATGAACCCGTAATGCTAACCTTCATTATTCAACAGTG  
ATGCTTATGGCAATGCCAACGGGTGTTGGGGCCTTTTATTAATTTTAAATTTTAGTTTTT  
TATGTTTTTGAGACAAGATCTTGATTGTGCGCCGAGCTGGAGTGCAGCGGTGCAATCAC  
AGCTCACTGCAGCCTCGATCTCCTGGGCTCAATCAATCCTCCACCTCAGCCTCCTGAGT  
AGCTGGGACTATAGGCATGTGCCCCAGACTTGGCAAATTTATGCATTTTTTGTAGAGAC  
[A, G]  
GGATTTTGCCATGTTGCCAGGCTGGTCTCGAACTCCTGAGCTCAAGCAATCCGCCTACC  
TTGGCTTCCCAAAGTGCTGGAATTACTGGTGTGAGCCACCGTGCCCTGCCTGCTTGAGCC  
TTTTTGCTATTCTCCCTCCTATGGGAAAAAGAATCGAGAAAGAGCAGTAGGCTCTACTAG  
AGTCTGGAGCATATCGGTTCTGAGATTTAGATTAAATTTCTATGTCTGCAGCAAGTAC  
AAATGTGAGTGATATTACAGCCTCTTGAAGAAGACATCTATCCATTTCTTCAGTGAATAT

16827 GAGCAGTAGGCTCTACTAGAGTCTGGAGCATATCGGTTCTGAGATTTAGATTAAATTTCT  
CTATGTCTGCAGCAAGTACAAATGTGAGTGATATTCAGCCTCTGAAGAAGACATCTAT  
CCATTTCTTCAGTGAATATTTGCCCGGAGTCTTCTTCGTGACAGGCACTGTTGTAGGCCC  
TGGAGGTACAGCAATAACAAGACGAAGTCTCTGCCCTCCTGAACTAACCGTTTAGCCA  
AGGCTTAGCATCTCTCACACTCAGGTCAACTTCTGCATTTTAGAAATCTGTTTCAGGCAC  
[G, A]  
CATTTGACAAGTAAAGAGGTTCCAAAAATACATTAATAAGGATGAAATGAGGCCATTCT  
GATATTCATTGCTTGGCAAAATGCTTAATATGGGAATTTAATATGGAATGGGTGCTGA  
TGCTGTCAAAGGTGGTGACATTCTGTTAGAAAATTCAGTGATTTCAAAGAAGGCCTCAGA  
GCTGCCTAGTTTGAATTAGATATTTGAAGAATCTGTGTTAATTAGGACTCTGTGGCTT  
GTGCATGTATACTGGGACGAGACTGGAGTTTGTGTCTCTCCCATGATGATGGCATGTAA

17599 TGTCTTTTGAAGTAGGAGGAAATTAGGACTTTTGTCTGTTATATGCCTTGCACTCTCTGG  
CCTTCTCTGGGCTGCTGGGGCAGAATGAGGCCAACAGAGAACCACGGATGCCAGTCTGGG  
TCACAAGGGCTTAAGGAAGCAGCAGATGGTTGGACTGACTGGGGTGTCCATTAAAGATCC  
AGGGGTAGTGAGAGTCTTACCTGGAGTTTGAAGGCCGCACTTCCATTGCCAGGACTCTCAG  
CTGAGTGGCTGGAAGAGACCTGTAGGAGCCATCCTTCCAGTATCTATCAGAGGTTTCTGC  
[A, T]  
CTGTTTAAAGCTCGTCTAGTGATCGAGGGAACCTTGACTGGGGGTGCTGATGATTATTA  
ACAGTGCCATACTCCACGGCTGCAGGTGGAGATGAAGTGTGTTGATGAGAAGATGAGCA  
AGAGCTCAGGTGTGCCCCACCAGCTCTGCCACTCCCAAGCTGCCGAACCTAGGCACTAAC  
TTACCTCTCTGTGTCTGCTTCCCAACTTGAGAACCAGGAAATGATAAAAGTACCTGCTCCC  
TAGGGAGTAGGTATGGTTAAATGAGACCTCTTAAATGAGACCATGCACACGAAGAGCAGA

FIGURE 3HHH



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

18093 TCTGCTTCCCAACTTGAGAACCGGAAATGATAAAAAGTACCTGCTCCCTAGGGAGTAGGTA  
TGGTTAAATGAGACCTCTTAAATGAGACCATGCACACGAAGAGCAGAGCACAGTGCCTGG  
CACACAGGAGGCACCTAATAAACATCAATGATGCTGCTGCTGGTAACACCCATTTGCTGA  
GGGTCTTCAGTGGCTCAGGCACAGTACTCAGTGTCTAACATATAATATGTAATTTATTCT  
TCACAGTAGCCTGAGTCACTTGCTTGTCTCTTCTGGTTAATATCCTAATGTTTAGCTCACC  
[A, G]  
ACTTAGATGCTCATGACTTCCAAAGGATCTTCATGTAACAAGGACTCCATATCTATTTTT  
AAAAAATAAGAGCTTTATTAAGATATAATTTACATACCATAAAAATTACCTATTTAAAATG  
TACAATTCACTGGTGTCTTAGTATATTCACAGAGTTGTGCAATCATCATCACTATCTAATT  
GTAGAAAATTTTCATGACTCCAAAAGAACTCCATATCCATTAGCAGTCACTCCCCATT  
TTATCTCTCCAGTCCCTGGCAAGCATGAATTTACTTTCTGTCTCTATGGAGTTGCCTAT

18226 CCTAATAAACATCAATGATGCTGCTGCTGGTAACACCCATTTGCTGAGGGTCTTCAGTGG  
CTCAGGCACAGTACTCAGTGTCTAACATATAATATGTAATTTATTCTTCACAGTAGCCTG  
AGTCACTTGCTTGTCTCTTCTGGTTAATATCCTAATGTTTAGCTCACCAACTTAGATGCTC  
ATGACTTCCAAAGGATCTTCATGTAACAAGGACTCCATATCTATTTTTAAAAAATAAGAG  
CTTTATTAAGATATAATTTACATACCATAAAAATTACCTATTTAAAATGTACAATTCAGTG  
[G, C]  
TTTTTAGTATATTCACAGAGTTGTGCAATCATCATCACTATCTAATTGTAGAAAATTTTC  
ATGACTCCAAAAGAACTCCATATCCATTAGCAGTCACTCCCCATTTATCTCTCCAG  
TCCCTGGCAAGCATGAATTTACTTTCTGTCTCTATGGAGTTGCCTATTTTGGGCATTTCA  
TGTAATGGCATCATACAACAGGTAGATATTTGTGTGTGTGTGTGTGTGTGTGTGTGTGT  
GTGTGTGATCAGCTTCTTTCACGTAACATAATGCTTCAAGGGTCACTCATGTGGCATC

18467 TTTATTAAGATATAATTTACATACCATAAAAATTACCTATTTAAAATGTACAATTCAGTGG  
TTTTTAGTATATTCACAGAGTTGTGCAATCATCATCACTATCTAATTGTAGAAAATTTTC  
ATGACTCCAAAAGAACTCCATATCCATTAGCAGTCACTCCCCATTTATCTCTCCAG  
TCCCTGGCAAGCATGAATTTACTTTCTGTCTCTATGGAGTTGCCTATTTTGGGCATTTCA  
TGTAATGGCATCATACAACAGGTAGATATTTGTGTGTGTGTGTGTGTGTGTGTGTGTGT  
[-, T, G]  
TGTGTGATCAGCTTCTTTCACGTAACATAATGCTTCAAGGGTCACTCATGTGGCATCC  
ATACCTATTTTGAATGAAGAATGAAGACAGTCATCTGAGACAGTTGTATTAGTCCATTG  
GAAGATGAGGAACTGAGGCTGAGAGTGTGTATGTAATTTGCTCATGGCCACCCATCTTG  
AAAGCGCTTGAGCTGGGATTTGTGCTCAGGTCCATCTGGCTCCAAGGCAAGACCTTGCC  
CTTCTCATCCACTCACTGGTCTCTGGTTGGACCTCTGCATCATGCTGAACACCATTCTA

18511 ATGTACAATTCAGTGGTTTTTAGTATATTCACAGAGTTGTGCAATCATCATCACTATCTA  
ATTGTAGAAAATTTTCATGACTCCAAAAGAACTCCATATCCATTAGCAGTCACTCCCC  
ATTTTATCTCTCCAGTCCCTGGCAAGCATGAATTTACTTTCTGTCTCTATGGAGTTGCC  
TATTTTGGGCATTTTCATGTAATGGCATCATACAACAGGTAGATATTTGTGTGTGTGTGT  
GTGTGTGTGTGTGTGTGTGTGTGATCAGCTTCTTTCACGTAACATAATGCTTTCAGGGT  
[-, A, T]  
CACTCATGTGGCATCCATACCTATTTTGAATGAAGAATGAAGACAGTCATCTGAGACAGT  
TGTATTAGTCCATTGGAAGATGAGGAACTGAGGCTGAGAGTGTGTATGTAATTTGCTC  
ATGCCCACCCATCTTGAAAGCGCTTGAGCTGGGATTTGTGCTCAGGTCCATCTTGCTCC  
AAGGCAAGACCTTGCCCTTCTCATCCACTCACTGGTCTCTGGTTGGACCTCTGCATCATG  
CTGAACACCATTTCTATAGAGATGGGTGTGTCCACTGGGTGTGGACATCCTGAGGAATT

19107 GAATTGCTGTGGTTGCAAGAACTCTGATATTTTCCATCTACCTTGAGGGGGATATGGTTT  
CATGTCTGTATACTCACATAGTGTGACCACTAATTTCTTTGTCCATTTCTTAAGGGT  
TATGATATGAACCTGGAAAGTTACAGAAATGAAAGTGATAGGAGAGATATACTTTCTGGG  
TTGGAAACCCAGCAACCAGTCACTCAATATGATGGAGGAAATGTCATCCTTCTTGTTGTG  
TCTTCAATAATAGATTGTAATGAAACACTATGGTGCTTAGTTGGCTCCCCCTCTGCCCC  
[G, A]  
TGCCCCCTCCCCAGCCCCAGTGTCTTTCTGGAGACATGAGATGGTGTATCCCTTCTCTCA  
GTTGCTGTGATAGCAGTGGGGATGATGGGACAGGTATTGATGGAAGGAAAAGGCATGGT  
ACCAGCAGGCTCTGGGCAGGGATGTGTGTCTTCACTTGATCATCAGGGAATGAGCTATC  
ATGATGACAGAGCATCCTATGAAGTACAAATCTCCCCCACATTTCCCCAAAATTACT  
TTTGTCTGTCTGTCTCTCACATGCTATTCTAGGGAAAAGGTCCCATTTTATCATTA

FIGURE 3III



19223 GGGTTATGATATGAACTTGGAAGTTACAGAAATGAAAGTGATAGGAGAGATATACTTTC  
TGGGTTGGAACCCAGCAACCAGTCACTCAATATGATGGAGGAAATGTCATCCTTCTTGT  
GTTGTCTTCAATAATAGATTGTAATGAAACACTATGGTGTCTTAGTTGGCTCCCCCTCTG  
CCCCGTGCCCCCTCCCCAGCCCCAGTGCTTTTCTGGAGACATGAGATGGTGTATCCCTT  
CCTCAGTTGCTGTATAGCAGTGGGATGATGGGACAGGTATTATGGAAGGAAAAGGC  
[A, G]  
TGGTACCAGCAGGCTCTTGGGCAGGGATGTGTGTCTTCACTTGATCATCAGGGAATGAGC  
TATCATGATGACAGAGCACATCCTATGAAGTACAAATCTTCCCCACATTTCCCCAAAT  
TACTTTTGTCTGCTCTGTCTCTCACATGCTATTCTAGGAAAAGGTCCCATTTTATCA  
TTAAATGCAAATGAGATTTCCATCTTGCTTCTACCAAAGAAGGAGGAAAATAACCTATA  
TAAACACCATGAAACCTTACTTTGACTTAAACTAGTGGAATTTGGCCCCCTGAATCAGAT

20102 TGGAAGGCAGGAAGTGTGGGGAATTAGTGGACCCAGGAGGAGCCCTCAACCAATAACT  
GATGGAAGATGGTGCCTAAACACCCCAATTCCCTCAGCCTTGGGTAGGGTAACCTCAGGAA  
TATGGTTTACATGGGGTCCAGTTTCCCTCTGTAGGAAAAATCCACTGGGCGACAGCAGT  
AGCTAGTTAGAACTTCACCTTTTATGGTTTTCTTGGCTGCCTTCCCAGCCCTTTCTCT  
TTTCTCTAATTCCTACTGGCGATTCTTCACTTCCCAAACAAACCACTTGTGCTCAAAT  
[T, C]  
GTAATTGTAGGATCAGCTTCTGGGGAAACCCAAATGAAGACATATGGTAAAGCTTCCCTC  
TTTTCTTGCCCTTTCTGCCTTTTGCCCCAATCAGTTAGCTTTGATGGTGGGAGTGAGGGGA  
TGCTCAACCTCTCAGGCAGGCTAATGGCTCTCAGGAGACACAATCCACAGCTGATTGGCA  
GTTTTCTCCCCAAGATATCTTCAGAACAAACCCCTGGTGGTGGTGAGTGATCCATGCAGCA  
TGAAAAGAGAGGGTGAAGCTTGATGAGGCATGTTCCAGTCTCATCAAATATTTTGTTC

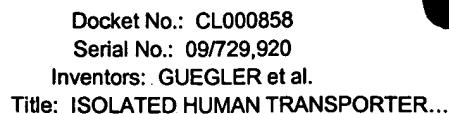
21946 TTTTTGTGGAGACGGCCTCCCTATGTTGCCAGGCTGGTCTCCAACCTCCTGTTTTCAAG  
CCATCCCCCTTCTCACTCTCCCAAAGTACAATTTAGTATATTTATTAACGTTGTGTTCCA  
GGCTTTTTGATTGCTATTGAGATGCTAATGAGATGGTCCCTGTCATTAAAGAGCGTCCAT  
TCTGGTGGCACAAGGAACCTCAAATTATGACACAAGACAGAATACCTACTCCAGAAGAGAG  
TTCTGTGAAAGCGTGAAGGAGGGACTTGAGTGTGCGATTGAGGAAGGACTTCACATTGGA  
[G, T]  
GGAGTTTTTTTAGATAGGTCTTGAGAAACATTTTACATTTTGAACACCTCATACATCATT  
GATAAAAAAAGAAGCAATTGGTCGAAACAACCTTCAATTTCCCCAGATCAAGTCTTCTAGG  
TTACCTGCATCTGCACCCACCAGTCCCACTTGATTCTCTCTAGATGAAGGGCGTCTTT  
TCCTACCTAAGGCCGTCCCTTCTGCTTATGCTGGGGAACCTTTGCTCTTTGGGGCATCC  
TCTCTTCTCCTGGGAATTGATCTCTCCCTCTCTACTTGAATATTCCTACTAGTGATAC

22240 ATTGGAGGGAGTTTTTTTAGATAGGTCTTGAGAAACATTTTACATTTTGAACACCTCATA  
CATATTGATAAAAAAAGAAGCAATTGGTCGAAACAACCTTCAATTTCCCCAGATCAAGTC  
TTCTAGGTTACCTGCATCTGCACCCACCAGTCCCACTTGATTCTCTCTAGATGAAGGG  
CGTCTTTTCTACCTAAGGCCGTCCCTTCTGCTTATGCTGGGGAACCTTTGCTCTTTGG  
GGCATCCTCTCTTCTCCTGGGAATTGATCTCTCCCTCTCTACTTGAATATTCCTACTAG  
[T, C]  
GTATACATGGGCTTCCGTGTCTATCCCCCTTGATCCCGCATTGCCGCCAGCCACCCCTCAT  
TCCTTTAGGCCTTTACAGCAAAATGCTGGAAAGGGTGGTCTGAAGTCACCATCACTAC  
TTCTTCCCCTCACATTCTTTCCAAGCCACCACCTTTATGGGGGCTGCTCCTTTGGAGG  
CCACTTATGGACATTGCATCACCTTTCTGTCCTTTTATCTTAAGTACCAGTTAGGATGCT  
TTCAGCTGCCTGTGCGAATGTCTGATACAAGTGACTTACACAATACGGACATTGACT

22679 TTCCAAGCCACCACCACTTTATGGGGGCTGCTCCTTTGGAGGCCACTTATGGACATTGCA  
TCACCTTTCTGTCTCTTTTATCTTAAGTACCAGTTAGGATGCTTTGAGCTGCCTGTTGCAG  
AATGTCCTGATACAAGTGACTTACACAATACGGACATTGACTGTTAAGAGAGTTACGTTT  
TCACTGAACAAGGATGTTCCAGGCTTGGCTTGGTGTTCATAACACCTTCAAGGACCCA  
GACTTCAGTTTCTGCCCCTGCCTCTCTTGATCACATCAGCAGATATTATGTCGTCTAAAA  
[A, G]  
CAGGGAAGGGAGTGAAGTAGCCTCTGTGTTTTTCTTTTTATCATGGAGGATGTTTTTTT  
GCCCTGCAAGCCCCATGCACATTTCTTAAATATCACCCCTAAACTCATCCCTGGCAAAG  
GGGGATGGTATTATCCTTATTGGCTTGGACCAATTAAGATTCTCCCTGAGTCTGTGAA  
TGGGACGCATCTTTTGAATGTGTCAATTTAACCAAAATGGATCTGTTAAAGGAAGG  
GGGAGCGCCTAAGGTGAAGTGCCAGGCAGTGTCTGCCACATTTTCCCTGACCCTTCCCTA

FIGURE 3JJJ





AATGTTGTCAATTTAACCAAATTGGATCTGTTAAAGGAAGGGGAGCGCCTAAGGTGAA  
 AGTGCCAGGCAGTGTCTGCCACATTTCCCTGACCTTCTCTAGCAATTTTGACAGCCAGC  
 CACCCCATCCTTCTTGAAGCACTTCATTTCCATCACATGCTTTGTGACATCATTTCTCT  
 GGGTTTTATTATTATTATTTTTTTATTATTGTAGACAAAATCTCTCTGTTGCC  
 AGGCTGGAGTGCAGTGGCACGATCTCAATTCACTGCAACCTCTGCCTCCCGGGTCAAGT  
 [T, C, G]  
 ATTTTCTGCTCAGCCTCCCAAGTAGCTGGGATAACAGGCATGTGCCACCACCTAGC  
 TAATTTTGTATTTTGTAGAGACAGGGTTTACCATTGTTGGCCAGACTGGTCTTGAAC  
 TCCTGACCTCAGGTGATCCACCGCTCGGCCTCCAAAGTGCTGGGATTACAGTCATAA  
 GCCACCGCGCTGGCCGCTCTGGGTTTTCTTTAACTTTTCTGGCCACTCTGTTTCTCTG  
 TTGACTCCTTCTCATTTGCTCTACCTCTAATTGGTGAATGCCCAATAGTTAGACCTGA

TTTATTTATTTTTTTATTTATTTGAGACAAAATCTCTCTCTGTTGCCAGGCTGGAGTGC  
AGTGGCACGATCTCAATTCAGTGAACCTCTGCCTCCCGGGTTCAAGTGATTTTCTGCCC  
TCAGCCTCCCAAGTAGCTGGGATAACAGGCATGTGCCACCACACCTAGCTAATTTTTGTAT  
TTTTTAGTAGAGACAGGGTTTACCATGTTGGCCAGACTGGTCTTGAACCTCTGACCTCA  
GGTGATCCACCCGCTCGGCCTCCCAAAGTGCTGGGATTACAGTCATAAGCCACCGCGCC  
[T, G]  
GGCCGCTCTGGGTTTTCTTTAACTTTTTCTGGCCACTCCTGTTTCTGTGACTCCTTTC  
TCATTGCTCTACCTCTAATTGGTGGAATGCCAAATAGTTAGACCTGAGGTCCTTCTGT  
CAGGATCTGATAGGTTCTCTGAGTCACTCAGCAGTCCCTTTGTATCATCTATATGCCGA  
GTATATCCTAAACTTGCCTTCTGATCAAGAGTTTGTGCATCTCATTGAATGAGTTTCCCATCT  
CATTGATGGGCACCGCCATCTATCTGTATAGTTGCTTAAAGTACGGGCATGTTGCATGAG

CAGACTGGTCTTGAACCTCCTGACCTCAGGTGATCCACCCGCTCGGCCTCCCAAAGTGCT  
GGGATTACAGTCATAAGCCACCGCGCCTGGCCGCTCTGGGTTTTCTTTAACTTTTCTGG  
CCACTCCTGTTTCTGTTGACTCCTTTCTATTGCTCTACCTCTAATTGGTGGAATGCCC  
AAATAGTTAGACCTGAGGTCCTTCTTGTCAGGATCTGTAGGTTCTCTGAGTGATCTCAG  
CAGTCCCTTTGTATCATCTATATGCCGAGTATATCCTAAACTTGCTTCTCTCAAGAGTTT  
[A, G]  
TCATCTCATTGAATGAGTTTCCCATCTCATTGATGGGCACCGCCATCTATCTGTATAGTT  
GCTTAAAGTACGGGATGTTGCATGAGTCCTCTGTTTCCCAACCCCTGCCATTTGTTCTC  
CACTCAACGCAAGATCCTGCCTGATACGATATCTGAACACATCCAGAATCTGTTGTTT  
CTCTCCATTTCTGCTCCTGCCACCCTCATTTCCACGCACTTTCTGTGTGGAGAGCTGACA  
GCCTTTTTATCGGCCTCCTTTCTTCTACCTTGCTCCCAATAATTGATCCTCCGTGGAAC

CCCAATAATTGATCCTCCGTGGAACAGCCACAATGATCTTTTAAAAATATGAATCTGATT  
TCTCTTGACCCGCAGCTTAAATTTCTCTATCGGTTCTCTTTCCACTCGGCATAAAATCT  
GCTTTCTGGTGCTGGCCTGCAGCACCCTGAGTGCTGGCTGTGCTGACCTCCTTTCCAAGG  
CTGGTCTTGAGCCGTCTTCTCTAACCTATGCTGCACTTCTTTCTGCTTTCCTTGAATAA  
AACAAGCTCCTCTGATCTGAGGGCCTTTACGGGACCTCTTTTTTTTTTTTTCTCCTAG  
[G, A]  
ATTATCTTCTGCCCAATTTTCATAGGACTGGCTTCTCCTCGCCTCTGAAATCTCAGTCCA  
AATGTCATGTCCTCCAAGAACTTTTCTCTAACCGCCCACTCCTGCTGGGCACCCCTCTGT  
GTAGCATACTGTTAGGAGTCTCTGCATCATGCCTCTTAACCTCTTTGAAAAAAGTTCTATT  
TGTTAGTTTTAAAAACTAAACTAAAAATTTATAAACCAAAATTTCAAATTTTAAAAAT  
TAATAAACTAAAAACAGTACAATGATATCTCTGTGAAGTCAAGGGAGGAGAGAGTTTTAA

GAGTGCTGGCTGTGCTGACCTCCTTTCCAAGGCTGGTCTTGAGCCGCTTCTCTCTAACT  
ATGCTGCACCTCTTTCTGCTTTCCTTGAATAAAACAAGCTCCTCCTGATCTGAGGGCCTT  
TACGGGACCTCTTTTTTTTTTTTTTCTCCTAGGATTATCTTCTGCCCAATTTTCATAGGA  
CTGGCTTCTCCTCGCCTCTGAAATCTCAGTCCAAATGTCATGTCCTCCAAGAATCTTCT  
CTAACCGCCCACTCCTGCTGGGCACCTCTGTTGTAGCATACTGTTAGGAGTCTCTGCAT  
[C, T]  
ATGCCTCTAACTCTTTGAAAAAAGTTCTATTTGTTAGTTTAATAAACTAAAACTAAAAA  
ATTTATAAAACCAAATTTCAAATTTTAAAAATTAATAAACTAAAAACAGTACAATGATAT  
CTCTGTGAAGTCAAGGGAGGAGAGAGTTTAAAGAAGGGGAACCTTAATTAGCAGCATAAAA  
GGCTCTACAACGACTCAAGATAAGTATAATGATGATGATGATGGTGATAATGACAT  
GATAACTAACCAATTATTGTTACTATGAACCTGGAAGAGTGCCAGGCATTTTGCGTACATT

FIGURE 3KKK



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

24493 TCTCCTCGCCTCTGAAATCTCAGTCCAAATGTCATGTCCTCCAAGAATCTTTCTCTAACC  
GCCCCACTCCTGCTGGGCACCCCTCTGTTGTAGCATACTGTTAGGAGTCTCTGCATCATGCC  
TCTAACTCTTTGAAAAAAGTTCTATTTGTTAGTTTAATAAACTAAAACTAAAAATTTA  
TAAACCAAATTTCAAATTTTAAAAATTAATAAACTAAAAACAGTACAATGATATCTCTG  
TGAAGTCAAGGGAGGAGAGAGTTTAAAGAAGGGGAACCTTAATTAGCAGCACTAAAGGCTC  
[T, C]  
ACAACGACTCAAGATAATGATAATGATGATGATGATGATGGTGATAATGACAGTGATAAC  
TAACATTTTATTGTTACTATGAACCTGGAAGAGTGCCAGGCATTTTGCCTACATTATCATA  
TTTAATTCTGACAGATTAAAAGTCTGACAATGCCTCTACTGTCAAGGAATGTTATTCTC  
ATTCTCAGAACACTGAGACTTAGGGAGGTGAGTCAAAGTGCCTGGCACATGGTAGCTTTC  
GATTAATGTTTGCTATGTGAGTAAATAAATTTCCACAAGGTCTGGAGCTGGTGAATGGT

24822 ATGATGATGATGGTGATAATGACAGTGATAACTAACATTTATTGTTACTATGAACCTGGA  
AGAGTGCCAGGCATTTTGCCTACATTATCATATTTAATCTGACAGATTAAAAGTCCCTGA  
CAATGCCCTCTACTGTCAAGGAATGTTATTCTCATTCTCAGAACACTGAGACTTAGGGAGG  
TCAGTCAAAGTGCCTGGCACATGGTAGCTTTTCGATTAATGTTTGCTATGTGAGTAAATAA  
ATTTCCACAAGGTCTGGAGCTGGTGAATGGTAGAGTTGAGAGTCTAACTTAGATCTGAC  
[C, T]  
GAATCCAAAGTCCGTATTTGTAACCACTGGTCTATATTTGCTCAGATGAAGACAGAGAAC  
CCCTTAACAGATTGAGAAAAGGAAGCCTAATATAGGATAAATGATTCTTATTTATTTAA  
AACATGATAAAATAAATTAATTTTCAGTCCAAAACCTTCTGAATTTTGGAATTTCTGGACT  
CCATTCAATTCATTTGAAGGCATAGGTGAGTTCTTTAAAGAAGCATTAGGAATGAATGA  
ATCCAGATTGAACAATTTTCTTATTAATAACCTAAAGATGCATTCTTATGATGAGCCA

24946 GCCTCTACTGTCAAGGAATGTTATTCTCATTCTCAGAACACTGAGACTTAGGGAGGTCAG  
TCAAAGTGCCCTGGCACATGGTAGCTTTTCGATTAATGTTTGCTATGTGAGTAAATAAATTT  
CCACAAGGTCTGGAGCTGGTGAATGGTAGAGTTGAGAGTCTAACTTAGATCTGACCGAA  
TCCAAAGTCCGTATTTGTAACCACTGGTCTATATTTGCTCAGATGAAGACAGAGAACCCC  
TTAACAGATTGAGAAAAGGAAGCCTAATATAGGATAAATGATTTCTTATTTATTTAAAC  
[-, A]  
TGATAAATAAATTAATTTTCAGTCCAAAACCTTCTGAATTTTGGAATTTCTGGACTCCAT  
TCATTCAATTCATTTGAAGGCATAGGTGAGTTCTTTAAAGAAGCATTAGGAATGAATCC  
AGATTGAACAATTTTCTTATTAATAACCTAAAGATGCATTCTTATGATGAGCCAGGTT  
CATTTGTCCAGGAAAGCTATTAAACTCAGTCTTTGTGATGAGTGAGTGAAGAACCCCACT  
TGAATTACGTAGTGAGCAGGTGCTTCTAAACCAAGTTTCATGTTTGACAAGCTAGGAGA

24947 CCTCTACTGTCAAGGAATGTTATTCTCATTCTCAGAACACTGAGACTTAGGGAGGTCAGT  
CAAAGTGCCCTGGCACATGGTAGCTTTTCGATTAATGTTTGCTATGTGAGTAAATAAATTT  
CACAAGGTCTGGAGCTGGTGAATGGTAGAGTTGAGAGTCTAACTTAGATCTGACCGAAT  
CCAAAGTCCGTATTTGTAACCACTGGTCTATATTTGCTCAGATGAAGACAGAGAACCCCT  
TAACAGATTGAGAAAAGGAAGCCTAATATAGGATAAATGATTTCTTATTTATTTAAACA  
[-, A, T]  
GATAAATAAATTAATTTTCAGTCCAAAACCTTCTGAATTTTGGAATTTCTGGACTCCATT  
CATTCAATTCATTTGAAGGCATAGGTGAGTTCTTTAAAGAAGCATTAGGAATGAATCCA  
GATTGAACAATTTTCTTATTAATAACCTAAAGATGCATTCTTATGATGAGCCAGGTTTC  
ATTGTCCAGGAAAGCTATTAAACTCAGTCTTTGTGATGAGTGAGTGAAGAACCCCACTT  
GAATTACGTAGTGAGCAGGTGCTTCTAAACCAAGTTTCATGTTTGACAAGCTAGGAGAG

24959 AGGAATGTTATTCTCATTCTCAGAACACTGAGACTTAGGGAGGTGAGTCAAAGTGCCCTGG  
CACATGGTAGCTTTTCGATTAATGTTTGCTATGTGAGTAAATAAATTTCCACAAGGTCTG  
GAGCTGGTGAATGGTAGAGTTGAGAGTCTAACTTAGATCTGACCGAATCCAAAGTCCGT  
TTTGTAAACCACTGGTCTATATTTGCTCAGATGAAGACAGAGAACCCCTTAACAGATTGAG  
AAAAGGAAGCCTAATATAGGATAAATGATTTCTTATTTATTTAAACATGATAAATAAAA  
[T, C]  
TAATTTTCAGTCCAAAACCTTCTGAATTTTGGAATTTCTGGACTCCATTCAATTCATT  
TTGAAGGCATAGGTGAGTTCTTTAAAGAAGCATTAGGAATGAATCCAGATTGAACAATT  
TTCTTATTAATAACCTAAAGATGCATTCTTATGATGAGCCAGGTTTCATTGTCCAGGAA  
AGCTATTAAAACTCAGTCTTTGTGATGAGTGAGTGAAGAACCCCACTTGAATTACGTAGT  
GAGCAGGTGCTTCTAAACCAAGTTTCATGTTTGACAAGCTAGGAGAGAACCCAGTGTTA

FIGURE 3LLL



25321

Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

27280

TGAAGGCATAGGTGAGTTCTTTAAAAGAAGCATTAGGAATGAATCCAGATTGAACAATTT  
TCTTATTAAAATACCCTAAAGATGCATTCTTATGATGAGCCAGGTTTCATTGTCCAGGAAA  
GCTATTAAACTCAGTCTTTGTGATGAGTGCAGTAAGAACCCCACTGAATTACGTAGTG  
AGCAGGTGCTTCCCTAAACCAAGTTTCATGTTTGACAAGCTAGGAGAGAACCCAGTGTAA  
ATGTTTCTGGCATGTTGGCCTTTGGTTTCTCATATTATGGGACATATGTTTAGTGCTTG  
[T, G]  
GGTATATGCTTAGCCTACTCTTGTAGGATGACTGAGACCTCACACAACATCAAGGACATA  
GTCTTTGCCTTTGCTGAGTTCAGAGTGTAATTGGAGTGATGAAACATACATGTGAATAAA  
TGCAAAGTCACAAGTAAAGACAGTTAATGTGATTGATGAAGGACGTGTGGCACAAGATGG  
ATAAGAATGAGAAGTAGAAGAAGTAGGTGGTTTTGAACCTTCGTTACTCAGGGAAGGGAA  
TGTATGTGGATTGGTGGAGAAGAGAGGGGAGGAAGATGGTTTTAAGCACTGGTAAGATGG

28062

TATGGATACCTTACATGCTAGGTTGAACATGGATTTATTTTCACAGATGATCAGGAGCCA  
TGGAAGGCTACACTAGCTGGGCGTACATAATTTAAGTCAGAGGGACAAATAACTGCAAGC  
TAAATACTCTTAGGGAGAAACTGCAGCAATCTGGGTGAGAAACAATGAATTTGTGAGTAG  
TCACCATAGCAAAGGTCTGGGCTAGGGGGCACTGGAGGAGTGAAAAAGAAAGGTTTAAA  
TAGTCACTGAGAGGGCTGAGGACCCACTAGCCACTGGCATAGTGGAGTCAATCATTCTC  
[C, T]  
GAAATTACGAGGAGGAGAGGTGGGGCATCTCTAAGGCGTGGAGCAGTGGAGGATGGTGAT  
TGTATGGTAGGGGAAAGAAGATAATGATCGCAGTTCAGTAGGTGATGGATGAGGAGGGG  
AAGGCGTTTTACAGATTATTCAGTGGGAAAGAACAGAGGCAGTCCACACTGTAGTTAATT  
CCTTTTATTTTGTCTTTAAGTATACTCAAGGATAAATAGCCATACAATTTCTGTTTGGC  
TTTTCATGCTGGAGAGGTGCAGAGGTTGCACTGAACGTGGACGATATTAATTTGACTTG

29033

GTGGCTGTGGATGCAATTCTGCCTTTACACAGAAATGACTCTCCTGGGCATACCTTTAGG  
CAAAGAGCAGATGAACGCATAACGAGCAGCTTTGAGATTTGGTATTTCCCACTGCAGAACG  
AAGAGAAGGGTGGCCCACTGGAAATTTCTCAGAGAAACGTCTAAGTCTGCATCTCCAC  
ATCCATTCAATTTTCATGCATAGTTCTTTCATCTGTTGTTTTTTAATTTATCTATTTTATA  
TAATGTCTATCTCTGTAGTACCTGGGATGAAATGCGCCAATCTGACTGCAATGAATAGG  
[G, A]  
CAAAGCAATTCTTGGGAGCTGCTCTGGGCAGGAAGTGGAGGCTGAATTCTTTTAAAGGAA  
AATTTTTTGGGGATCGTGACTCACTGGCCTTCATCCCATCATCACTGGGATTGGTTAAG  
TGCCAGGAAACAGCTGGAAGTCGACAGACAATTTAGGGTACAAATGAAAGGAGAAGTTAC  
TGTTAAAGGGATCTGTATTCTCTGTTATCAAACCACCAACGCTGTCTCCTAGCTAATAG  
GAACCAAACTGTGCCTGAGAATGCTGCCAGATGTTTCTCAATAGGCACGTTACGTTTT

29302

ATGTTTCTCCAAGAGAAATGTTCTATTGTACTACATTAATTCTTAGATGCATTTTGAAT  
TATTACCCTTCTGAAATCAGAATGTGTCTTACTAGCAATATGTCATAATTTAATTGGCA  
ATTTAAATTTTCAAGAGGCACATAAGATAATGATGTGTTTTGTAATTGACAATGTCTTGA  
TTTGATAGAAGATAATTTGTACAATACTATATTGGTACCATGCTTTGGCCGATGTAATGGT  
CCTATTTTGGAGTTCACTACTAATGTTAAGCCTCTAGTTTTAGGCGTTGATGTTGGTCCAG  
[G, C]  
GACACTAGGACTCAAATGCCAGATGTCCAGGTCTAAGAGAGAAGAATCAGAAGGTGAAT  
GCAGAGCCCACTGGGTTCAAGCCATGTAGACAATAATAGCAGAATGGAGAGACATTTTCC  
GATGCCTCATGTCTATGCATCTTCTCTCCCTTTCTGGCCTGCCACATAAATTCATTGCAG  
TGCAACTCTGCCAGATATCAGAATAGAGCAGGAGGAAAGAGAAACAGCTGCAGCATGGGA  
GATAGGACTCATACCAAGAGAGATTAGGCTCGGTGTGTATACCTAATGATGGTAAAGTGA

CCTCTAGTTTTAGGCGTTGATGTTGGTCCAGGGACACTAGGACTCAAATGCCAGATGTC  
CAGGTCTAAGAGAGAAGAATCAGAAGGTGAATGCAGAGCCCACTGGGTTCAAGCCATGTA  
GACAATAATAGCAGAATGGAGAGACATTTTCCGATGCCTCATGTCTATGCATCTTCTCTC  
CCTTCTGGCCTGCCACATAAATTCATTGCAGTGCAACTCTGCCAGATATCAGAATAGAG  
CAGGAGGAAAGAGAAACAGCTGCAGCATGGGAGATAGGACTCATACCAAGAGAGATTAGG  
[C, -]  
TCGGTGTGTATACCTAATGATGGTAAAGTGAACAACCAGGTTACAGTGATAGCAGCAACA  
CGCATTTATCGAGTGTCTATCCACTTCAGAAACACTATTTTAAATGATAACAATTCTA  
CAAGATAAGTATTCAATGATCATCAATATTATCCTTGTTTCATGTGTAAAACCTGGGGCTC  
AGAGAGGGGTAAAAAATTTGTCCAAGGTCAATACAGTTAGGAAATGGTAGAACAGGATTCA  
GGCTTTGCTCCATGGGGCATCAAGGTCTGCTCCACTTCAGTGTGCCATGCAGTTTCCCC

FIGURE 3MMM



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

31093 TCTTTTAGAGTTTCCAGTATAAGAACAAATAGATGAGCAAACACATATAAGAAATACATT  
GAAGAGAATTAGAATATTTCATGAATGTACAGTGAGAAATTCTTAACCTATACAGGGTCAT  
AGTTGACTTCATTTAAATATTTTCTAAGGGTAGAACGCAACATTATTAGAATACCTGAGA  
GGGAAGGTTGGGACCGTGCCCTTGAAGTAGCATATTAAATTTAAGAGAGGAAAGAGAAA  
GCTGGCAATATTTCAAGTCTGGAACCTGATCCTTAAGGCAATACTTTGCTGCTGGAATTTG  
[T, C]  
ATTTTAAAGACCAGCCAGAATCTCTGTGGTCCCTTGCCCATGTAGCCCTATGAGGACGT  
TTGTATATTTGGATTGCTTGAGGCCTGAGTGTCTATGGGCATAGGCAGAGTCATTGGATCA  
ACCCATGTATCTGTTGCTTGACACATTGCTCTGGATACATTGTACCCAAGAAATCAGCCC  
AAGTGGGATCCAGCCCAAAGAGAATTGTTGATTTTCAAACTGAACAGTCCAGGCAAAG  
CTCAATCTAGGGCTCAGATCATGCATCCAGGACTGCATAGTTCTTCATTTCTTGATTCTG

31454 TTGTATATTTGGATTGCTTGAGGCCTGAGTGTCTATGGGCATAGGCAGAGTCATTGGATCA  
ACCCATGTATCTGTTGCTTGACACATTGCTCTGGATACATTGTACCCAAGAAATCAGCCC  
AAGTGGGATCCAGCCCAAAGAGAATTGTTGATTTTCAAACTGAACAGTCCAGGCAAAG  
CTCAATCTAGGGCTCAGATCATGCATCCAGGACTGCATAGTTCTTCATTTCTTGATTCTG  
CTTCTTTGCATTGCTCTATTCTTAGGCAAGTTCATCTTGAAATCCTAAGGTGGCTGCC  
[G, A]  
AAGGCTGCAGACCCTCTCTGTCTTCCAGATTTACATCCTTCAGGAGAGCGAAAGCTCAG  
TTCCCTAAGGCTGAAACAAAAGTCTTGCAATGGCATCTTTTGGTCTGATTGGCCTGTCT  
TAGGGTCAGATACTCATTCTTTAATTATCATGGTGGTGAATGGGGGAATCGAATGTGCTA  
ATTGGCTTTGCCCTGGGTTGTGTGCTTCACTCATGGAACCTAAGAGAGAAGCCAGTGAAG  
CCCAACTCAAGGGCTGAGAGTGGGCTGTAGTGGTTTCCCTAAACAAAATCGGTACTGTTG

31834 AAGTCTTGCAATGGCATCTTTTGGTCTGATTGGCCTGTCTAGGGTCAGATACTCATTCT  
TTTAATTATCATGGTGGTGAATGGGGGAATCGAATGTGCTAATTGGCTTTGCCTGGGTTG  
TGTGCTTCACTCATGGAACCTAAGAGAGAAGCCAGTGAAGCCCACTCAAGGGCTGAGA  
GTGGCTGTAGTGGTTTCCCTAAACAAAATCGGTACTGTTGACATAAATATGGCATGGTCA  
TGGATGCTGAGAGAATGATGTAGAGAAAGGGTGGATGAGAATGGAAGCAGGACTAGGCAC  
[A, G]  
GTGGTTCACACTTGTAACCTCAGTCACTTGGGAGGCTGAGGCAGGAGGATCGCTTGTGGC  
CAGGAGTTAGTGACCAGCCTGAGCAACATAGTGAGACCCTATCTCTAAAAAATTATTT  
TTAAATTAGCCAAGTGTGGTGGTGCATGCCTATAGTCCCAGCTGCTTGGGAGACTGAGGT  
AGGAGGATCGCTTCAGCCCAGGAGTCAAAGTTACGGTGAGCTATGATTGCACCACTGCA  
CACTAGCCTGGGTAAACAGAGCAAGACTCTGTCCATAAAAAAGGAAGGAGGAGAGAA

31936 TTGGCTTTGCCTGGGTTGTGTGCTTCACTCATGGAACCTAAGAGAGAAGCCAGTGAAGC  
CCAACTCAAGGGCTGAGAGTGGGCTGTAGTGGTTTCCCTAAACAAAATCGGTACTGTTGA  
CATAATATGGCATGGTCAATGGATGCTGAGAGAATGATGTAGAGAAAGGGTGGATGAGAAT  
GGAAGCAGGACTAGGCACAGTGGTTCACACTTGTAACCTCAGCTACTTGGGAGGCTGAGG  
CAGGAGGATCGCTTGTGGCCAGGAGTTAGTGACCAGCCTGAGCAACATAGTGAGACCCTA  
[C, T]  
CTCTAAAAAATTTATTTTAAATTAGCCAAGTGTGGTGGTGCATGCCTATAGTCCCAGC  
TGCTTGGGAGACTGAGGTAGGAGGATCGCTTCAGCCCAGGAGTCAAAGTTACGGTGAGC  
TATGATTGCACCACTGCACACTAGCCTGGGTAAACAGAGCAAGACTCTGTCCATAAAAAA  
GAAGAAGGAGGAGGAGAAGGAGGCTAAGAAGAAAGGAAGTGGGTATGCTAGTTTGGAGGT  
ATTGAAGTCCAGGCAAAGAATCATGGTGGCTTGACAAGCAGAGTGAAGTCTGAGATGGA

31947 TGGGTTGTGTGCTTCACTCATGGAACCTAAGAGAGAAGCCAGTGAAGCCCACTCAAGG  
GCTGAGAGTGGGCTGTAGTGGTTTCCCTAAACAAAATCGGTACTGTTGACATAATATGGC  
ATGGTCATGGATGCTGAGAGAATGATGTAGAGAAAGGGTGGATGAGAATGGAAGCAGGAC  
TAGGCACAGTGGTTCACACTTGTAACCTCAGCTACTTGGGAGGCTGAGGCAGGAGGATCG  
CTTGTGGCCAGGAGTTAGTGACCAGCCTGAGCAACATAGTGAGACCCTATCTCTAAAAA  
[A, T]  
TTTATTTTAAATTAGCCAAGTGTGGTGGTGCATGCCTATAGTCCCAGCTGCTTGGGAGA  
CTGAGGTAGGAGGATCGCTTCAGCCCAGGAGTCAAAGTTACGGTGAGCTATGATTGCAC  
CACTGCACACTAGCCTGGGTAAACAGAGCAAGACTCTGTCCATAAAAAAGGAAGGAGG  
AGGAGAAGGAGGCTAAGAAGAAAGGAAGTGGGTATGCTAGTTTGGAGGTATTGAAGTCCA  
GGCAAAGAATCATGGTGGCTTGACAAGCAGAGTGAAGTCTGAGATGGAGAGTGGTGGAT

FIGURE 3NNN



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Inventors: GUEGLER et al.  
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31980

AGAAGCCCAGTGAAGCCCAACTCAAGGGCTGAGAGTGGGCTGTAGTGGTTTCCCTAAACA  
AAATCGGTACTGTTGACATAATATGGCATGGTCATGGATGCTGAGAGAATGATGTAGAGA  
AAGGGTGGATGAGAATGGAAGCAGGACTAGGCACAGTGGTTCACACTTGTAACCTCAGCT  
ACTTGGGAGGCTGAGGCAGGAGGATCGCTTGTGGCCAGGAGTTAGTGACCAGCCTGAGCA  
ACATAGTGAGACCTATCTCTAAAAAAATTTATTTTAAATTAGCCAAGTGTGGTGGTGC  
[A, G]  
TGCCTATAGTCCCAGCTGCTTGGGAGACTGAGGTAGGAGGATCGCTTCAGCCCAGGAGTT  
CAAAGTTACGGTGAGCTATGATTGCACCACTGCACACTAGCCTGGGTAAACAGAGCAAGA  
CTCTGTCCATAAAAAAGAAGAAGGAGGAGGAGAAGGAGGCTAAGAAGAAAGGAAGTGGGT  
ATGCTAGTTTGGAGGTATTGAAGTCCAGGCAAAGAATCATGGTGGCTTGGACAAGCAGAG  
TGACTGCTGAGATGGAGAGTGGTGGATGGGTTTGATTTCTAGTTTGGAGATGGAATCCAC

32156

AGCTACTTGGGAGGCTGAGGCAGGAGGATCGCTTGTGGCCAGGAGTTAGTGACCAGCCTG  
AGCAACATAGTGAGACCCCTATCTCTAAAAAAATTTATTTTAAATTAGCCAAGTGTGGTG  
GTGCATGCCTATAGTCCAGCTGCTTGGGAGACTGAGGTAGGAGGATCGCTTCAGCCCAG  
GAGTTCAAAGTTACGGTGAGCTATGATTGCACCACTGCACACTAGCCTGGGTAAACAGAG  
CAAGACTCTGTCCATAAAAAAGAAGAAGGAGGAGGAGAAGGAGGCTAAGAAGAAAGGAAG  
[T, G]  
GGGTATGCTAGTTTGGAGGTATTGAAGTCCAGGCAAAGAATCATGGTGGCTTGGACAAGC  
AGAGTGACTGCTGAGATGGAGAGTGGTGGATGGGTTTGATTTCTAGTTTGGAGATGGAAT  
CCACAGCATTGCTGATGAAATACATGTTGAAGATGGTAAGGAAAATAATTAAAAATGAT  
TCCTAGGCTTGTGGACTGAGTAACCTTGGGAGGATGGTGGTAGCATTCTTTGAGATAGGTA  
AGAATGGAGGGTTTTTATTATTTTAAATCAACTATGCTATTCTAGCTCTGTGGGATTTG

32161

CTTGGGAGGCTGAGGCAGGAGGATCGCTTGTGGCCAGGAGTTAGTGACCAGCCTGAGCAA  
CATAGTGAGACCCCTATCTCTAAAAAAATTTATTTTAAATTAGCCAAGTGTGGTGGTGCA  
TGCCCTATAGTCCCAGCTGCTTGGGAGACTGAGGTAGGAGGATCGCTTCAGCCCAGGAGTT  
CAAAGTTACGGTGAGCTATGATTGCACCACTGCACACTAGCCTGGGTAAACAGAGCAAGA  
CTCTGTCCATAAAAAAGAAGAAGGAGGAGGAGAAGGAGGCTAAGAAGAAAGGAAGTGGGT  
[A, G]  
TGCTAGTTTGGAGGTATTGAAGTCCAGGCAAAGAATCATGGTGGCTTGGACAAGCAGAGT  
GACTGCTGAGATGGAGAGTGGTGGATGGGTTTGATTTCTAGTTTGGAGATGGAATCCACA  
GCATTTGCTGATGAAATACATGTTGAAGATGGTAAGGAAAATAATTAAAAATGATTCCTA  
GGCTTGTGGACTGAGTAACCTTGGGAGGATGGTGGTAGCATTCTTTGAGATAGGTAAGAAT  
GGAGGGTTTTTATTATTTTAAATCAACTATGCTATTCTAGCTCTGTGGGATTTGAGAAG

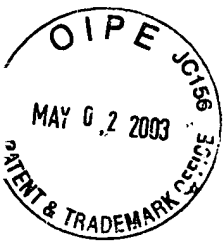
32436

GAGGCTAAGAAGAAAGGAAGTGGGTATGCTAGTTTGGAGGTATTGAAGTCCAGGCAAAGA  
ATCATGGTGGCTTGGACAAGCAGAGTGACTGCTGAGATGGAGAGTGGTGGATGGGTTTGA  
TTTCTAGTTTGGAGATGGAATCCACAGCATTGCTGATGAAATACATGTTGAAGATGGTA  
AGGAAAATAATTAAAAATGATTCCTAGGCTTGTGGACTGAGTAACCTTGGGAGGATGGTGG  
TAGCATTCTTTGAGATAGGTAAGAATGGAGGGTTTTTATTATTTTAAATCAACTATGCT  
[A, G]  
TTCTAGCTCTGTGGGATTTGAGAAGCCTGTTAATATCTGAGTGGGAATGTCAATTGGACA  
GTTGGAGACAGGAGTCTGGAATTTAGAGGGTAGAGCTGGAAATATATATTATGATGATATA  
TGAATCCATAATGAGAAGGGGTGGCTATAGCAGTTTTTATTTTACTTTTAAAGCCATTT  
AACTAGTTTATTTAAATTGGCGGGCCTTCTTGAGAGTACAAACCATAAAATCACTTCATTTA  
TCTTCAACTCCTACCTTCACTCTTGCCCTGTGAGGCCAACCTGGATGATACACCAGAAA

32490

CAAAGAATCATGGTGGCTTGGACAAGCAGAGTGACTGCTGAGATGGAGAGTGGTGGATGG  
GTTTGATTTCTAGTTTGGAGATGGAATCCACAGCATTGCTGATGAAATACATGTTGAAG  
ATGGTAAGGAAAATAATTAAAAATGATTCCTAGGCTTGTGGACTGAGTAACCTTGGGAGGA  
TGGTGGTAGCATTCTTTGAGATAGGTAAGAATGGAGGGTTTTTATTATTTTAAATCAAC  
TATGCTATTCTAGCTCTGTGGGATTTGAGAAGCCTGTTAATATCTGAGTGGGAATGTCAA  
[T, C]  
TGGACAGTTGGAGACAGGAGTCTGGAATTTAGAGGGTAGAGCTGGAAATATATATTATGAT  
GATATATGAATCCATAATGAGAAGGGGTGGCTATAGCAGTTTTTATTTTACTTTTAAAG  
CCATTTAACTAGTTTATTAAATTGGCGGGCCTTCTTGAGAGTACAAACCATAAAATCACTT  
CATTTATCTTCAACTCCTACCTTCACTCTTGCCCTGTGAGGCCAACCTGGATGATACAC  
CAGAAAATACCTCACAGCTTTTCCAGGCACTTTAAAAATCAAATCAAGTAAATAGAAATA

FIGURE 3000



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32526 GCTGAGATGGAGAGTGGTGGATGGGTTTGATTCTAGTTTGGAGATGGAATCCACAGCAT  
TTGCTGATGAAATACATGTTGAAGATGGTAAGGAAAATAATTAAAAATGATTCCTAGGCT  
TGTGGACTGAGTAACTTGGGAGGATGGTGGTAGCATTTCTTGAGATAGGTAAGAATGGAG  
GGTTTTTATTATTTTAAAAATCAACTATGCTATTCTAGCTCTGTGGGATTTGAGAAGCCTG  
TTAATATCTGAGTGGGAATGTCAATTGGACAGTTGGAGACAGGAGTCTGGAATTTAGAGG  
[G, A]  
TAGAGCTGGAATATATATTTCATGGATATATGAATCCATAATGAGAAGGGGTGGCTATAG  
CAGTTTTTACTTTTAAAGCCATTTAACTAGTTTATTAAATTGGCGGGCCTTCTT  
GAGAGTACAAACCATAAATCACTTCATTTATCTTCAACTCCTACCTTCACTCTTGCCTG  
TGAGGCCAACCTGGATGATACACCAGAAATACCTCACAGCTTTTCCAGGCACTTTAAAA  
ATCAATCAAGTAAATAGAAATAAAAAATTGTACTTTTTTTTTTTCAGATATTCAAAAGTCC

32893 TTATTTTTACTTTTAAAGCCATTTAACTAGTTTATTAAATTGGCGGGCCTTCTTGAGAGT  
ACAAACCATAAATCACTTCATTTATCTTCAACTCCTACCTTCACTCTTGCCCTGTGAGGC  
CAACCTTGGATGATACACCAGAAATACCTCACAGCTTTTCCAGGCACTTTAAAAATCAAA  
TCAAGTAAATAGAAATAAAAAATTGTACTTTTTTTTTTTCAGATATTCAAAAGTCCAGTTTT  
ACATGAATCAAAACATCAACCTCTCATCCAATTCAAAGCTCTCTTTCAGCCGGGTGAGGT  
[A, G]  
GCTTGTGCCTGTAATCCCAGCACTTATGGGAGGCCGAGGCAGGCCATCGCTTGAGCCCAG  
GAGCTTGAGACCAGCCTGGTGAAACCCTGTCTCTACTGAAAATACAAAAACTAGCTGGGC  
GTGGTGGTGTGTGCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCACAAGAGTCGCTTGA  
ACAAGTGGGGAGGACTTTGCAGTGAGCAGAGATCGTGCCACTGCACCCAGCCTGGGTGA  
CAGAGCCAGTCCCTGTCCAAAACAAAACCAACAAAAAACCTGTAATCCCAGCACTCTG

32900 TACTTTTAAAGCCATTTAACTAGTTTATTAAATTGGCGGGCCTTCTTGAGAGTACAAACC  
ATAAATCACTTCATTTATCTTCAACTCCTACCTTCACTCTTGCCCTGTGAGGCCAACCT  
GGATGATACACCAGAAATACCTCACAGCTTTTCCAGGCACTTTAAAAATCAAATCAAGTA  
AAATAGAAATAAAAAATTGTACTTTTTTTTTTTCAGATATTCAAAAGTCCAGTTTACATGAA  
TCAAAACATCAACCTCTCATCCAATTCAAAGCTCTCTTTCAGCCGGGTGAGGTAGCTTGT  
[G, T]  
CCTGTAATCCCAGCACTTATGGGAGGCCGAGGCAGGCCATCGCTTGAGCCCAGGAGCTTG  
AGACCAGCCTGGTGAAACCCTGTCTCTACTGAAAATACAAAAACTAGCTGGGCGTGGTGG  
TGTGTGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCACAAGAGTCGCTTGAACAAGTG  
GGGAGGACTTTGCAGTGAGCAGAGATCGTGCCACTGCACCCAGCCTGGGTGACAGAGCC  
AGTCCTGTCCAAAACAAAACCAACAAAAAACCTGTAATCCCAGCACTCTGGGAGGCC

33087 AATAAAAAATTGTACTTTTTTTTTTTCAGATATTCAAAAGTCCAGTTTACATGAATCAAAAC  
ATCAACCTCTCATCCAATTCAAAGCTCTCTTTCAGCCGGGTGAGGTAGCTTGTGCCTGTA  
ATCCCAGCACTTATGGGAGGCCGAGGCAGGCCATCGCTTGAGCCCAGGAGCTTGAGACCA  
GCCTGGTGAAACCCTGTCTCTACTGAAAATACAAAAACTAGCTGGGCGTGGTGGTGTGTG  
CCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCACAAGAGTCGCTTGAACAAGTGGGGAGG  
[A, G]  
CTTTGCAGTGAGCAGAGATCGTGCCACTGCACCCAGCCTGGGTGACAGAGCCAGTCCCT  
GTCCAAAACAAAACCAACAAAAAACCTGTAATCCCAGCACTCTGGGAGGCCGAGGTGG  
GTACATCACTGAGGTGCGCAGTTCAAGACCTGCCTGGCCAAAATGGTAAACCCCGTCT  
CTACTGAAAATACAAAAATTGGCTGGGCATTGTGGCGGGTGCCATAATCCCAGATATT  
CAGGATGCTGAGGCAGGAGAATTGCTTGAACCCGGGAGGCAGAGTTTATATTGAGCCGAG

33474 CCTGTAATCCCAGCACTCTGGGAGGCCGAGGTGGGTACATCACCTGAGGTGCGGCAGTTCA  
AGACCTGCCTGGCCAAAATGGTAAACCCCGTCTCTACTGAAAATACAAAAATTTGGCTG  
GGCATTTGTGGCGGGTGCCATAATCCAGATATTCAAGATGCTGAGGCAGGAGAATTGCT  
TGAACCCGGGAGGCAGAGTTTATATTGAGCCGAGATCGCGCCATTGCACTCCAGCCTGGG  
TGACAGAGGGAGACTCCATCTCAAACAACAACAGCAACAACAACAAAACAAAATCACAAA  
[C, G]  
CTCTCCTTTCCCTGTAGGCCAGGCCTGGCCTGAGACACTGCAGATCAGCCATGGGAAAGG  
GAAGGCGGGGGCGTGGCTGTTCCCTTTCCCTCCTTGTGCACACTCCTTTCTGTCTGGCT  
TTGTGCTTTTGGCTCCACCACAGTCAAGGGGCAGGGAGAAGGTGACTAGAAAGCAAGGG  
TGTTTTACTTAGCTGGTGCTTCTTATGGTTCTTTCTAGTCATGAAATAGTCTCTGTCTTG  
CAGGTGTCCAGCTTTTGTGAGTTCTTCGCCACCCTGTGAAGACCCCGAGACTTTCCTCTA

FIGURE 3PPP



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

33474

CCTGTAATCCCAGCACTCTGGGAGGCCGAGGTGGGTACATCACCTGAGGTCGGCAGTTCA  
AGACCTGCCTGGCCAAAATGGTAAAACCCCGTCTCTACTGAAAATACAAAAAATTGGCTG  
GGCATTGTGGCGGGTGCCTATAATCCCAGATATTCCAGGATGCTGAGGCAGGAGAATTGCT  
TGAACCCGGGAGGCAGAGTTTATATTGAGCCGAGATCGCGCCATTGCACTCCAGCCTGGG  
TGACAGAGGGGAGACTCCATCTCAAACAACAACAGCAACAACAACAAAACAAAATCACAAA  
[C, T, G]  
CTCTCCTTTCCCTGTAGGCCAGGCCCTGGCCTGAGACACTGCAGATCAGCCATGGGAAAGG  
GAAGGCGGGGGCCGTGGCTGTTCCCTTTCCCTCCTTGTGCACACTCCTTTCTGCTGGCT  
TTGTGCTTTTGGCTCCACCACAGTCAAGGGGCAGGAGAAGGTGACTAGAAAGCAAGGG  
TGTTTTACTTAGCTGGTGCTTCTTATGGTTCTTTCTAGTCATGAAATAGTCTCTGTCTTG  
CAGGTGTCCAGCTTTTGTGAGTTCTTCGCCACCCTGTGAAGACCCCGAGACTTTCCTCTA

33474

CCTGTAATCCCAGCACTCTGGGAGGCCGAGGTGGGTACATCACCTGAGGTCGGCAGTTCA  
AGACCTGCCTGGCCAAAATGGTAAAACCCCGTCTCTACTGAAAATACAAAAAATTGGCTG  
GGCATTGTGGCGGGTGCCTATAATCCCAGATATTCCAGGATGCTGAGGCAGGAGAATTGCT  
TGAACCCGGGAGGCAGAGTTTATATTGAGCCGAGATCGCGCCATTGCACTCCAGCCTGGG  
TGACAGAGGGGAGACTCCATCTCAAACAACAACAGCAACAACAACAAAACAAAATCACAAA  
[C, T, G]  
CTCTCCTTTCCCTGTAGGCCAGGCCCTGGCCTGAGACACTGCAGATCAGCCATGGGAAAGG  
GAAGGCGGGGGCCGTGGCTGTTCCCTTTCCCTCCTTGTGCACACTCCTTTCTGCTGGCT  
TTGTGCTTTTGGCTCCACCACAGTCAAGGGGCAGGAGAAGGTGACTAGAAAGCAAGGG  
TGTTTTACTTAGCTGGTGCTTCTTATGGTTCTTTCTAGTCATGAAATAGTCTCTGTCTTG  
CAGGTGTCCAGCTTTTGTGAGTTCTTCGCCACCCTGTGAAGACCCCGAGACTTTCCTCTA

33741

ACAACAGCAACAACAACAAAACAAAATCACAAAGCTCTCCTTTCCCTGTAGGCCAGGCCCT  
GGCCTGAGACACTGCAGATCAGCCATGGGAAAGGGAAGGCGGGGGCCGTGGCTGTTCCCTT  
TTCCCTCCTTGTGCACACTCCTTTCTGCTGGCTTTGCTGCTTTTGGCTCCACCACAGTC  
AAGGGGCAGGGAGAAGGTGACTAGAAAGCAAGGGTGTTTTACTTAGCTGGTGCTTCTTAT  
GGTTCTTTCTAGTCATGAAATAGTCTCTGTCTTGCAGGTGTCCAGCTTTTGTGAGTTCTT  
[C, G]  
GCCACCCTGTGAAGACCCCGAGACTTTCCTCTACAGACATGGATGATGCCCTCCCTGGCT  
GGTCTCTTATGACACCCCGGCCCTCTCAGCTTCTGCCTTGAGTGTACCCTGAACCTTTTCT  
TCTCAAGTGGATGGACTTCTTGGGGAAGGCTTTTTTCTGAAGGCTTTGATGTAGCTTCTG  
ACCCCATCCAGTGCTTACTTGGCCAGGAGAAACCATAGGCATCTTTGTGCTGCCATATA  
ATGGGGAAGCACGTGACTCCACTGTTGCCTACCCTCCTCAGCCTGCATTACAGGCCAAA

34043

CCACCTGTGAAGACCCCGAGACTTTCCTCTACAGACATGGATGATGCCCTCCCTGGCTG  
GTCTCTTATGACACCCCGGCCCTCTCAGCTTCTGCCTTGAGTGTACCCTGAACCTTTTCT  
CTCAAGTGGATGGACTTCTTGGGGAAGGCTTTTTTCTGAAGGCTTTGATGTAGCTTCTGA  
CCCCATCCAGTGCCCTACTTGGCCAGGAGAAACCATAGGCATCTTTGTGCTGCCATATA  
TGGGGAAGCACGTGACTCCACTGTTGCCTACCCTCCTCAGCCTGCATTACAGGCCAAAC  
[G, A]  
CTGCGCACCCATGTCTGATTTTCCAGGGCCGTCTCATTGCACACCTCCAGAGGGCATCA  
TTCACATGTGTTCTCCTAGAATTGCACAGTTAATGTGGCAGCCCTGAGTTCAGACAAATC  
TCTCATGCCCTACCTGTAGCAGTGCACTTCTATGAAGTATGCAGTTCAGCAGGCACCCAG  
CTGGGGTTCAGATGCTGAGACCCCTTCTGCCAACCCCTCTGATCTCTGAGCAGTTCTC  
TTTCTGCTCCTTCATTGCCATAGTGCTGCAATGCTATGTGTTCTTTCTGCTAAGAAAT

34053

AAGACCCCGAGACTTTCCTCTACAGACATGGATGATGCCCTCCCTGGCTGGTCTCTTATG  
ACACCCCGGCCCTCTCAGCTTCTGCCTTGAGTGTACCCTGAACCTTTTTTCTCAAGTGG  
TGGACTTCTTGGGGAAGGCTTTTTTCTGAAGGCTTTGATGTAGCTTCTGACCCCATCCAG  
TGCCCTACTTGGCCAGGAGAAACCATAGGCATCTTTGTGCTGCCATATATGGGGAAGC  
ACGTGACTCCACTGTTGCCTACCCTCCTCAGCCTGCATTACAGGCCAAACGCTGCGCACC  
[C, T]  
ATGTCGTGATTTTCCAGGGCCGTCTCATTGCACACCTCCAGAGGGCATCATTACATGTG  
TTCTCCTAGAATTGCACAGTTAATGTGGCAGCCCTGAGTTCAGACAAATCTCTCATGCC  
CTACCTGTAGCAGTGCACTTCTATGAAGTATGCAGTTCAGCAGGCACCCAGCTGGGGTCC  
AGATGCTGAGACCCCTTCTGCCAACCCCTCTGATCTCTGAGCAGTTCTTTCTGCTCC  
TTCATTGCCATAGTGCTGCAATGCTATGTGTTCTTTCTGCTAAGAAATGCTTTTTCTC

FIGURE 3QQQ



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34297 GACTCCACTGTTGCCTACCCTCCTCAGCCTGCATTACAGGCCAAACGCTGCGCACCCATG  
TCTGATTTTCCCAGGGCCGTCTCATTGCACACCTCCAGAGGGCATCATTACATGTGTTT  
TCCTAGAATTGCACAGTTAATGTGGCAGCCCTGAGTTCAGACAAATCTCTCATGCCCTTA  
CCTGTAGCAGTGCATTCTATGAAGTATGCAGTTCAGCAGGCACCCAGCTGGGGTTCCAGA  
TGCTGAGACCCCCCTCTGCCAACCCCTCTGATCTCTGAGCAGTTCTCTTTCTGCTCCTTC  
[A, C]  
TTTGCCATAGTGTGCAATGCTATGTGTTCTTTTCTGCTAAGAAATGCTTTTTCTCCAGC  
GAATTCCTTTATATGGCTTAGAGATCATATGCAAGCTCTGCATTGATGGATCCTCAGTCT  
TCAGTTTGTAGAGATCTCAGTATAAACCCCAAGACAACAGGAAAGGGCTCACTTAACATT  
GCCTTGTAACAGAGAAACCTCTCTTTGAATGAAAGCTGTGAGGGAAGCTCAGTATATAA  
AGCAGGTGACATGGTGTCCATTGGGGTGGTGGGGAACGAGGGGCGGGGTGCTCAAGGCT

37209 CAGTGGGGTGGTGAAGGAAGTCCCTCGCTGAGGAGGCAGCATTGAGCACTGAGAGGGA  
GCTACCCTGTAAGGCCCTGGGCAAGACTGTTCCAGGTTGAGGGAACAACACACGTGCAGT  
CCCTGAGACTAGAGCTAACTTGGACAAATGAGAAGACCAGTGTGGCTGGGCGGTATTGAG  
GGACAGATGGTAGGAGATGAAGGTGGAGAAGTGGGCCATGGCCAGAATTTGGGGATCTAA  
GGACAGGAGTTTGGGAGGTTCTCAAGGAGTTGTGGGAACCCCTCTGGGAAGGTTTTCAGC  
[T, C, G]  
TGCAGTGGAAGGATCGAATTTACATTTTGGCAGGCAGGTTAGGACACTGTTGTGCAGAAA  
CAACAATGGCTAATGGGCTGGTTGAGGTGGGAATGAAAGAAGTGGTGAATGAAATCAGG  
ATGTATTTGGAAGGAGAGTTGGCTGGACTGGCTGTGGGTGTGAGGCAGGGTGGAGCCA  
TAGACTACTTGGATTTTCTGTCCAAGCCCTGGATGAATAGCAGTACCATGAATTGAGAT  
GCACAAGCCTAGGAGAAGAGGCAGATTTGGGATGTGAATGTGTATGAGTGAAAACAAAT

37475 GGAGTTGTGGGAACCCCTCTGGGAAGGTTTTTCAGCGTGCAGTGGGAAGGATCGAATTTACAT  
TTTGGCAGGCAGGTTAGGACACTGTTGTGCAGAAACAACAATGGCTAATGGGCTGGTTGA  
GGTGGGAATGAAAGAAGTGGTGGAAATGAAATCAGGATGTATTTGGAAGGGAGAGTTGGCT  
GGACTGGCTGTGGGTGTGAGGCAGGGTGGAGCCATAGACTACTCTGGATTTTCTGTCCA  
AGCCCTGGATGAATAGCAGTACCATGAATTGAGATGCACAAGCCTAGGAGAAGAGGCAGA  
[G, T]  
TTGGGATGTGAATGTGTATGAGTGAAAACAAAATTTCTCTTTGAATCATGTTCAATGTGC  
TACTTGGACAAGCAGCTAATTGGACAACCTAAGTGTAAAAATTAATAGTGAACAATGAGT  
GGAACAAAACGTTAGAGCTGTACATTTTGCTTTAGAAGGGGCATACTTTTTTGCTTTAGAA  
CGTGTGGCAATCTAATACAAATGGCCAACAAACATATGAAAAATGCTCAACATCACTAA  
TGATAAGGGAGATGCAAATCAAACACAAAGCGTACTGCCTTACCCCTGCAAGAATGG

38476 GGATGGAATTGGAGACCAACATTCTAAGTGAAGTAACTCAGGAATGGAAAAACCAACAT  
TGTGTGTTCTTACTTATAAGTGGGAGCTAAGCTATGAGGATGCAAAGGCATCCTCATTTGG  
ACTTTGGGGACTTGGTGAAAAGGGTGGGGGCAGTGAGGGATAAAAGACAGCAAATTTGGGT  
ACAGTGACACTGCTCGGGTGTGGGTGCACCAAAATTTCAAGTCACCACTAAAGAGC  
TTAGTCATGTAACCAACACCACCTCTTCCCCAAAACCTACAGAAATAATAATAAAAAA  
[A, G]  
AACTTGTGGCAATCTAATTGATGATAATTGATGGTAGCATCCATGTTGGGAAGGAAGGA  
AACAAATGCCAAACACTATGCTAGCTGCTTCACATGTATTGTTTTTCACAGGGTGTAAAGC  
TTGAGAAGCATCTAGTGTCTGTGTGAGATTATGCATTCTGGAGGCAGATTGCTAAGGTT  
CAAGTCCTGGCCCTGCCTGTAGTGGCATGTTCTATGCTTTGCTTGCTTATCTGTAAAAAT  
GGAGTAATAATAACCTTGCTTGTAAGTTATTTTACATTTAAATGAGTTAATGCATG

38486 GGAGACCAACATTCTAAGTGAAGTAACTCAGGAATGGAAAAACCAACATTGTGTGTTCT  
TACTTATAAGTGGGAGCTAAGCTATGAGGATGCAAAGGCATCCTCATTTGGACTTTGGGGA  
CTTGGTGAAAAGGGTGGGGGCAGTGAGGGATAAAAGACAGCAAATTTGGGTACAGTGTA  
CTGCTCGGGTGTAGGGTGCACCAAAATTTCAAGTCACCACTAAAGAGCTTAGTCATGT  
AACCAAAACACCACCTCTTCCCCAAAACCTACAGAAATAATAATAAAAAAGAACTTGTGG  
[C, T]  
AATCTAATTGATGATAATTGATGGTAGCATCCATGTTGGGGAAGGAAGGAAACAATGCCA  
AACACTATGCTAGCTGCTTCACATGTATTGTTTTTCACAGGGTGTAAAGCTTGAGAAGCA  
TCTAGTGTCTGTGTGAGATTATGCATTCTGGAGGCAGATTGCTAAGGTTCAAGTCCTGG  
CCCTGCCTGTTAGTGGCATGTTCTATGCTTTGCTTGCTTATCTGTAAAAATGGAGTAATAA  
TAATACCTTGCTTGTAAGTTATTTTACATTTAAATGAGTTAATGCATGTAAAGCACTT

FIGURE 3RRR





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Inventors: GUEGLER et al.  
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38576  
TGCAAAGGCATCCTCATTGGACTTTGGGGACTTGGTGAAAAGGGTGGGGCAGTGAGGGA  
TAAAAGACAGCAAATTGGGTACAGTGACACTGCTCGGGTGATGGGTGCACCAAATTTTC  
ACAAGTCACCACTAAAGAGCTTAGTCATGTAACCAAACACCACCTCTCCCCAAAAACCT  
ACAGAAATAATAATAAAAAAGAACTTGTGGCAATCTAATTGATGATAATTGATGGTAGCA  
TCCATGTTGGGGAAGGAAGGAAACAATGCCAAACACTATGCTAGCTGCTTCACATGTATT  
[A, G]  
TTTTTCACAGGGTGTAAAGCTTGAGAAGCATCTAGTGTCTGTGCAGATTATGCATTCT  
GGAGGCAGATTGCTAAGGTTCAAGTCCTGGCCCTGCCTGTTAGTGGCATGTTCTATGCTT  
TGCTTGCTTATCTGTAAATGGAGTAATAATAATACCTTGCTTGTAAGTTATTTTACAA  
TTTAAATGAGTTAATGCATGTAAAGCACTTGGAATAGTGCCTGGTATTGTAATAAACAAT  
AAATGAGCAATTTTAATGTTACTATTTTATTTTCTCCGTAGGGTGCACCTCAATAGATGG  
38810  
GTAGCATCCATGTTGGGGAAGGAAGGAAACAATGCCAAACACTATGCTAGCTGCTTCACA  
TGATTGTTTTTCACAGGGTGTAAAGCTTGAGAAGCATCTAGTGTCTGTGCAGATTAT  
GCATTCTGGAGGCAGATTGCTAAGGTTCAAGTCCTGGCCCTGCCTGTTAGTGGCATGTTT  
TATGCTTTGCTTGCTTATCTGTAAATGGAGTAATAATAATACCTTGCTTGTAAGTTAT  
TTTTACATTTAAATGAGTTAATGCATGTAAAGCACTTGGAATAGTGCCTGGTATTGTAAT  
[A, G]  
AACATAAATGAGCAATTTTAATGTTACTATTTTATTTTCTCCGTAGGGTGCACCTCAAT  
AGATGGAAGAGTAGGGCATGTGATAAGGTTTGGCTGTGTTCTCATCCAAATCTCATTTTG  
AATTGTAGCTCCCAATAATTTTCACATGTTGTGGGTGGGACCAGGTGGGAAGTAACCTGA  
CATGGGGCGGTTTCCCCATACTGTTCTCGTGGTAGTGAATAAGTCTCATGAAATCTAAT  
GGTTTTATAAGGGGTTTTCCCTTTCACCTTGATTCTCATTCTCTCTTGCTGCTGCCAAGA  
38825  
GGGAAGGAAGGAAACAATGCCAAACACTATGCTAGCTGCTTCACATGTATTGTTTTTCAC  
AGGGTGTAAAGGCTTGAGAAGCATCTAGTGTCTGTGCAGATTATGCATTCTGGAGGCAG  
ATTGCTAAGGTTCAAGTCCTGGCCCTGCCTGTTAGTGGCATGTTCTATGCTTTGCTTGCT  
TATCTGTAAATGGAGTAATAATAATACCTTGCTTGTAAGTTATTTTACATTTAAATG  
AGTTAATGCATGTAAAGCACTTGGAATAGTGCCTGGTATTGTAATAAACAATAAATGAGC  
[A, C]  
ATTTAATGTTACTATTTTATTTTCTCCGTAGGGTGCACCTCAATAGATGGAAGAGTAGG  
GCATGTGATAAGGTTTGGCTGTGTTCTCATCCAAATCTCATTTTGAATTGTAGCTCCCAT  
AATTTTCACATGTTGTGGGTGGGACCAGGTGGGAAGTAACCTGAATCATGGGGCGGTTCC  
CCCATACTGTTCTCGTGGTAGTGAATAAGTCTCATGAAATCTAATGGTTTTATAAGGGGT  
TTTCCCTTTCACCTGATTCTCATTCTCTCTTGCTGCTGCCAAGAAAGACGTGCCTTTTCA  
39317  
CTCGTGGTAGTGAATAAGTCTCATGAAATCTAATGGTTTTATAAGGGGTTTTCCCTTTTCA  
CTTGATTCTCATTCTCTCTTGCTGCTGCCAAGAAAGACGTGCCTTTCACCTTCTGCCAT  
AATTGTGAGGACTTCCCAGCCACATGGAAGTGTGAGTCCATTAAAGCCTCTTTTTCTTTAT  
AAATTAATTACCCAGTCTCAGGTATGTCTTTATCAGCAGTGTCAAAACAGACTAATACAA  
TGTGTTATAACAAGAGTGTTACTTCAGAATCTTGTTTTAACTTGTGTATTAGTCAGTGTG  
[C, T]  
AGGATGCTTGGGTTCTGTCTGCTGGTTTTTGGCATGTTTCCATTTTATGAGCAGTTCCTCTA  
TCACAATATAGATGAATGCCTCTATCACAATATAGATGCAGCAATAAGTTGGGATTGCTG  
CATAGCCATCCCAACTTATTGGCATAAAACAAGCATTTTATTATGCTCAGATAATGTGCT  
TCAGGGATTATGCAGGACACAGAGGCGATGGTTTGTCTCTATTCTGCAACGTCTGGGGC  
CTCACCTGGGAAGATGAGCCTCACCTGGGAAATCTACAGGTGTCTGTGGGGTTAGGGGAG  
40519  
TGTGCAAGATCCTGTGCTAATGGCTGTGGGAGCATATTGAGATGCCACAAGAAGTTGGCA  
TGCTAAAAGGTGAAGACAAATACAGATGGCTTTCAATTAAGTCTCTGGAGAGACAGA  
GGCCACTCACAACTCTAATGATAGTTAAAATAAACTTATTTCAGGCCAGGCACAGTGGC  
TCAGGCCTATAATCCAGCACTTTGGGAGGCTGAGGTGGGCGGATCACTTGAGGTGAGGA  
GTTCTAGACTACCCCGGCCAACATGGCGAAACCCCATCTCTACTAAAAATACAGAAATTA  
[A, G]  
CCAGGCATGGTGGTGCAGCCTGTAAATCCAGCTACTTGGGAGGCTGAGGCATGAGAGTC  
GCTTGAATCCGGGAGGCAGAGGTTGCAGTGAACCTAAGATGGTGCCACTGCACTCCAGCCT  
GGGCCACAGAGTGAGACTCCACCTCAAAAACAAACAAACAAACAAACACTATTTAAACA  
AGACACAAAGTGAGTTAATGCAAACTTATTTAGTTAGCATTGCATTTAATGTTCAAGGAA  
CACATGTTCCATTTTGTAGACTTCATTAATTACAACTAGCAGTTATTTAAGTGCTTACTA

FIGURE 3SSS



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41468

TCTTTCTCCCGTGCTGGATGCTTCCTGCCCTCCAACATCAGACTCCAAGTTGTTTAGCTT  
TTGGACTCTTGGACTTACACCAAGTGGTTTGCCAGGGGCTCTCAGACTTTTGGCCACAGTG  
CACTGTGCGCTTCCCTACGTTTGAGTTTGGGACTTGGGCTGTCTTCTTGCTCCTCAG  
CTTGAGATGGCCTATTGTGGGACACCTTGTGATCATGTGAGTCAATACTCCTTAATAAA  
TTCCCTTTTCATATGTACATCTATCCTATTAGTTCTGTCTTTCTCGAGAGCCCTGACTAAT  
[A, T, G]  
CAGTCATGGAGGCTGGCGTTTGTACCCAGGGTCTCCCAGTCCCCAGGTGCATGCTCAATG  
TGACAGGGCTAGTTAGTGCAAAGCCGGCACTAGAATCCAGGTTCTGGATTTTCTTCTTGG  
TGTCTTTCTCTAGACTTGAGGTTTGAATTGTGTTCTGAATCTTTGGGTCCTAAAA  
AAGTCTTGGGACCTGCTGCAGGGGTTGAGAAGAAGCAAAGCTCATGTGACTCTAGGCCCT  
TACTCCAAAGTCCAACCAAGTAGCATGCTTTGAGGTAAATTATATTGTGTTAACTTAAT

41468

TCTTTCTCCCGTGCTGGATGCTTCCTGCCCTCCAACATCAGACTCCAAGTTGTTTAGCTT  
TTGGACTCTTGGACTTACACCAAGTGGTTTGCCAGGGGCTCTCAGACTTTTGGCCACAGTG  
CACTGTGCGCTTCCCTACGTTTGGAGTTTGGGACTTGGGCTGTCTTCTTGCTCCTCAG  
CTTGAGATGGCCTATTGTGGGACACCTTGTGATCATGTGAGTCAATACTCCTTAATAAA  
TTCCCTTTTCATATGTACATCTATCCTATTAGTTCTGTCTTTCTCGAGAGCCCTGACTAAT  
[A, C, G]  
CAGTCATGGAGGCTGGCGTTTGTACCCAGGGTCTCCCAGTCCCCAGGTGCATGCTCAATG  
TGACAGGGCTAGTTAGTGCAAAGCCGGCACTAGAATCCAGGTTCTGGATTTTCTTCTTGG  
TGTCTTTCTCTAGACTTGAGGTTTGAATTGTGTTCTGAATCTTTGGGTCCTAAAA  
AAGTCTTGGGACCTGCTGCAGGGGTTGAGAAGAAGCAAAGCTCATGTGACTCTAGGCCCT  
TACTCCAAAGTCCAACCAAGTAGCATGCTTTGAGGTAAATTATATTGTGTTAACTTAAT

41565

CTCTCAGACTTTTGGCCACAGTGCACTGTGCGCTTCCCTACGTTTGAGTTTGGGACTT  
GGGCTGTCTTCTTTGCTCCTCAGCTTGCAGATGGCCTATTGTGGGACACCTTGTGATCAT  
GTGAGTCAATACTCCTTAATAAATTCCCTTTTCATATGTACATCTATCCTATTAGTTCTGT  
CTTTCTCGAGAGCCCTGACTAATGCAGTCATGGAGGCTGGCGTTTGTACCCAGGGTCTCC  
CAGTCCCCAGGTGCATGCTCAATGTGACAGGGCTAGTTAGTGCAAAGCCGGCACTAGAAT  
[A, C]  
CAGGTTCTGGATTTTCTTCTTGGTGTCTTTTCTCTAGACTTGAGGTTTGAATTGTGTT  
CCTGAATCTTTTGGGTCCTAAAAAGTCTTGGGACCTGCTGCAGGGGTTGAGAAGAAGCA  
AAGCTCATGTGACTCTAGGCCCTTACTCCAAAGTCCAACCAAGTAGCATGCTTTGAGGTA  
AATTATATTGTGTTAACTTAATATATGATACATAGTATAATGCAATACTTAATATATAT  
TTAATATATTTGTAAACATACAAAATACAATATCCAAGAGCAGTATGGAACACCAAAGGT

41625

GGGCTGTCTTCTTTGCTCCTCAGCTTGCAGATGGCCTATTGTGGGACACCTTGTGATCAT  
GTGAGTCAATACTCCTTAATAAATTCCCTTTTCATATGTACATCTATCCTATTAGTTCTGT  
CTTTCTCGAGAGCCCTGACTAATGCAGTCATGGAGGCTGGCGTTTGTACCCAGGGTCTCC  
CAGTCCCCAGGTGCATGCTCAATGTGACAGGGCTAGTTAGTGCAAAGCCGGCACTAGAAT  
CCAGGTTCTGGATTTTCTTCTTGGTGTCTTTTCTCTAGACTTGAGGTTTGAATTGTGT  
[A, T]  
CCTGAATCTTTTGGGTCCTAAAAAGTCTTGGGACCTGCTGCAGGGGTTGAGAAGAAGCA  
AAGCTCATGTGACTCTAGGCCCTTACTCCAAAGTCCAACCAAGTAGCATGCTTTGAGGTA  
AATTATATTGTGTTAACTTAATATATGATACATAGTATAATGCAATACTTAATATATAT  
TTAATATATTTGTAAACATACAAAATACAATATCCAAGAGCAGTATGGAACACCAAAGGT  
GTTCCAGACTTTTTTTTTTGGAGACAGTCTCGCTCTGTCAACAGGCTGGAGTGTGGTGGTGC

41921

GTGTTCTGAATCTTTTGGGTCCTAAAAAGTCTTGGGACCTGCTGCAGGGGTTGAGAAG  
AAGCAAAGCTCATGTGACTCTAGGCCCTTACTCCAAAGTCCAACCAAGTAGCATGCTTTG  
AGGTAAATTATATTGTGTTAACTTAATATATGATACATAGTATAATGCAATACTTAATA  
TATATTTAATATATTGTAAACATACAAAATACAATATCCAAGAGCAGTATGGAACACCAA  
AAGGTGTTGAGACTTTTTTTTTTGGAGACAGTCTCGCTCTGTCAACAGGCTGGAGTGTGGT  
[G, C, T, A]  
GTGCAATCTCAGCTCACTGCAACCTCTGCCTCCCTGGTTCAAGCAATTCTCCTGCCTCAG  
CCTCCTGAGTAGCTGGGACTACAGGTGCCACCACCATGCCTGGCTAATTTTTTTTTTGTA  
TTTTTGGTAGAGACGGGGTTTACCATGTTGGCCAGGACGGTCTCGATCTCTTGACCTCG  
TGATCCACCTGCCTTGGCCTCCCAAAGTACTGGGATTACAGGCGTGAGCCCTTCTTCA  
AATGGAATTTTATATCTGTGTTTACATTTTCTGCTTAAAGTTTGAATTTTGTTTAATTCA

FIGURE 3TTT



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42152 GAACACCAAAAGGTGTTTCAGACTTTTTTTTTTTGAGACAGTCTCGCTCTGTCAACCAGGCTG  
GAGTGTGGTGGTGAATCTCAGCTCACTGCAACCTCTGCCTCCCTGGTTCAAGCAATTCT  
CCTGCCTCAGCCTCCTGAGTAGCTGGGACTACAGGTGCCACCACCATGCCTGGCTAATT  
TTTTTTTGTATTTTGGTAGAGACGGGGTTTCACCATGTTGGCCAGGACGGTCTCGATCT  
CTTGACCTCGTGATCCACCTGCCTTGGCCTCCCAAAGTACTGGGATTACAGGCGTGAGCC  
[C, A]  
CTTCCTTCAAATGGAATTTTATATCTGTGTTTACATTTTCTGCCTTAAAGTTTGAATTTTG  
TTTAATTCAATTGAATTTCCACTTAAATGTAACTTTTGAAACCCACACCTCTGACATA  
TTCCACATTGCTGTTGGATATTTTAGTTTAAAGATTGGCCTGTAAGCTGTATCGGTAT  
CATTATTCTAACTTCAGGCTCAAGGTCTCAGTCACTAGTTAAAGTCTTTTCTACCGGCAA  
ATCTGTATTACCATCTACTGTGGAAGATAACCTCTAAAGTGCCCATGTAAGCACAAATCC

42498 AAAGTTTGAATTTTGTGTTAATTCAATTGAATTTCCACTTAAATGTAACTTTTGAAACC  
CACACCTCTGACATATTCACATTGCTGTTGGATATTTTAGTTTAAAGATTGGCCTGT  
AAGCTGTATCGGTATCATTATTCTAACTTCAGGCTCAAGGTCTCAGTCACTAGTTAAAGT  
CTTTTCTACCGGCAAATCTGTATTACCATCTACTGTGGAAGATAACCTCTAAAGTGCCCA  
TGTAAGCACAAATCCATAAACTAAAGTCAAAGAAAAAGAGAAAGAGTTTATTCCACT  
[G, T]  
TTTAAAGTTCAGTTTGATTTAGATCTTATATCTCTTGGGTTTTCTTGACTGATTTTTTA  
CATAAATGTGTCCAGAAAGAGTGATCATATCGTGATCTTTGTTCCAGTTTTCTTTTC  
CACATCAAGTTTCTCGATGGAAAGTGATTTAAAAAACCTTAAAGTGTGATAATCACT  
CTCTTCTTTAGTAGACAGTGGAGTTAATAGATGCATACAGCAGTTGTTTACTTGTGATG  
AAAAGAAATGTGAATTTTCTGGTGCAAGGACATTTCTAGCTCATGTCTAAATTGCAGAGA

42715 GAAGATAACCTCTAAAGTGCCCATGTAAGCACAAATCCATAAACTAAAGTCAAAGAAA  
AAAGAGAAAGAGTTTATTCCACTGTTTAAAGTTCAGTTTGATTAGATCTTATATCTCT  
TGGGTTTTCTTGACTGATTTTTTACATAAATGTGTCCAGAAAGAGTGATCATATCGTGA  
TCTTTGTTCCAGTTTCTCTTTTCCACATCAAGTTTCTCTGATGGAAAGTGATTTAAAAA  
AACCTTAAAGTGTGATAATCACTCTCTTTTAGTAGACAGTGGAGTTTAAATAGATGCA  
[T, G, A, C]  
ACAGCAGTTGTTTACTTGTGATGAAAAGAAATGTGAATTTTCTGGTGCAAGGACATTTCT  
AGCTCATGTCTAAATTGCAGAGAGACCACAGTTTGACATAGTGCTGAAGCAGGTTGTAAG  
AGGTAGGGGTACAATGTATGTCTGCACAGGTTGTGCACTATGCGACTGTGAATGGTGTCT  
TCTGGAATTGTCTATGCGGAAGCACTGTGAGGAGTCTGGATTCCAGCCTCTGTTGATT  
TTTGTGCATGGGAGAGCTTGATACCAAGCCTCAAAGTACTAGGAATAAGAAGGTATTACA

42776 AAGAGAAAGAGTTTATTCCACTGTTTAAAGTTCAGTTTGATTAGATCTTATATCTCTT  
GGGTTTTCTTGACTGATTTTTTACATAAATGTGTCCAGAAAGAGTGATCATATCGTGAT  
CTTTGTTCCAGTTTCTCTTTTCCACATCAAGTTTCTCTGATGGAAAGTGATTTAAAAA  
ACCTTAAAGTGTGATAATCACTCTCTTTTAGTAGACAGTGGAGTTTAAATAGATGCAT  
ACAGCAGTTGTTTACTTGTGATGAAAAGAAATGTGAATTTTCTGGTGCAAGGACATTTCT  
[T, C, A]  
GCTCATGTCTAAATTGCAGAGAGACCACAGTTTGACATAGTGCTGAAGCAGGTTGTAAGA  
GGTAGGGGTACAATGTATGTCTGCACAGGTTGTGCACTATGCGACTGTGAATGGTGTCTT  
CTGGAATTGTCTATGCGGAAGCACTGTGAGGAGTCTGGATTCCAGCCTCTGTTGATT  
TTGTGCATGGGAGAGCTTGATACCAAGCCTCAAAGTACTAGGAATAAGAAGGTATTACAT  
GCTGTAATTTTCAAGGTGGTGCCTTTCTGTACCTCCATTGCTTTTAGTTTAGGGCATTTC

43320 GTAATTTTCAAGGTGGTGCCTTTCTGTACCTCCATTGCTTTTAGTTTAGGGCATTCTTC  
TGCAATCTTTGGAGGGTTCCTAGGAATAAAAAAGTAGCTAGTTTGAGACAGTGTGCAATT  
GTGCTGAAATGGAGGACCATGGGGTAGATGTAGTTCCCTTCATGCCAGTAGCTAATTGG  
CTTAGTTTGTCTGATTTGTTCCAGGATATTCCTAAAAATAGGTGTCTTCTAAGCCTCAGC  
TTTGGGCCTTGAGGTATGGCATGGCTATCCGCTCTCTGCTCCTGCTGAGCTAAATGCAGT  
[G, T, C]  
CTGAATGCCAAATATTGAGATTGGAATTATCAAAGGACTATTAGCATCAAATTGAGAAA  
CTCAAGCTAAATTGCAAATTAATACAAAATCATGAAGTGAAGCTTCTCTTCCAGAGAACC  
TCTTGTAACAGAACTGAAGGTGGCAGGATGTCTTGATAGAGCGTGGATTTTAGAGCTGG  
ATGCATGCTGGGCTTATATCCTGGTTCAGCATTTGCCTTGGGCAAGTTATTTACAACCT  
CTGGTTGAGGTGGTGGACTAGTTGATATCTATGATTCTTTTAAAGTAAATAACTATTA

FIGURE 3UUU



Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

43341

TTCTGTACCTCCATTGCTTTTAGTTAGGGCATTCTTCTGCAATCTTTGGAGGGTTCCCT  
AGGAATAAAAAAGTAGCTAGTTTGGAGACAGTGTGCAATTGTGCTGAAATGGAGGACCATG  
GGGGTAGATGTAGTTCCCTTCATGCCAGTAGCTAATTGGCTTAGTTTGCTGATTTGTTCC  
AGGATATTCCTAAAAATAGGTGTCTTCTAAGCCTCAGCTTTGGGCCTTGAGGTATGGCA  
TGGCTATCCGCTCTCTGCTCCTGCTGAGCTAAATGCAGTCCTGAATGCCAAATATTGAGA  
[A, T]  
TTGGAATTATCAAAGGACTATTAGCATCAAATTGAGAACTCAAGCTAAATTTGCAAATT  
AATACAAATCATGAACCTGAGCTTCTCTCCAGAGAACCTCTTGTAACAGAACTTGAAGG  
TGGCAGGATGTCTTGATAGAGCGTGGATTTTAGAGCTGGATGCATGCTGGGCTTATATCC  
TGGTTCCAGCATTGCTTGGGCAAGTTATTTACAACCTCTGGTTGAGGTGGTTGGACTA  
GTTGATATCTATGATTCTCTTTTAAAGTAAATACTATTAGTTTTTTCATACAGTATAATT

43424

GAGACAGTGTGCAATTGTGCTGAAATGGAGGACCATGGGGGTAGATGTAGTTCCCTTCAT  
GCCAGTAGCTAATTGGCTTAGTTTGCTGATTTGTTCCAGGATATTCCCTAAAAATAGGTG  
TCTTCTAAGCCTCAGCTTTGGGCCTTGAGGTATGGCATGGCTATCCGCTCTCTGCTCCTG  
CTGAGCTAAATGCAGTCCTGAATGCCAAATATTGAGATTGGAATTATCAAAGGACTATT  
AGCATCAAATTGAGAACTCAAGCTAAATTTGCAAATTAATACAAATCATGAACCTGAGC  
[A, G, T]  
TCTCTCCAGAGAACCTCTTGTAACAGAACTTGAAGGTGGCAGGATGTCTTGATAGAGCG  
TGGATTTTAGAGCTGGATGCATGCTGGGCTTATATCCTGGTTCCAGCATTGCTTGGGC  
AAGTTATTTACAACCTCTGGTTGAGGTGGTTGGACTAGTTGATATCTATGATTCTTTT  
AAGTAAATACTATTAGTTTTTTCATACAGTATAATTACTATATAACAAACATCTTCTTC  
TTTGATTTTCAATCATGCATTCAAAGTATTTATTAATGCCCTCCAATGCCGGACACCATA

43509

CTGATTTGTTCCAGGATATTCCCTAAAAATAGGTGTCTTCTAAGCCTCAGCTTTGGGCCT  
TGAGGTATGGCATGGCTATCCGCTCTCTGCTCCTGCTGAGCTAAATGCAGTCCTGAATGC  
CAAATATTGAGATTGGAATTATCAAAGGACTATTAGCATCAAATTGAGAACTCAAGCT  
AAATTTGCAAATTAATACAAATCATGAACCTGAGCTTCTCTCCAGAGAACCTCTTGTA  
CAGAACTTGAAGGTGGCAGGATGTCTTGATAGAGCGTGGATTTTAGAGCTGGATGCATGC  
[A, G, T]  
GGGCTTATATCCTGGTTCCAGCATTGCTTGGGCAAGTTATTTACAACCTCTGGTTGAG  
GTGGTTGGACTAGTTGATATCTATGATTCTTTTTAAGTAAATAACTATTAGTTTTTTCA  
TACAGTATAATTACTATATAACAAACATCTTCTCTTTGATTTCAATCATGCATTCAAAG  
TATTTATTAATGCCCTCCAATGCCGGACACCATACTAGGTACTGGGTATATAAGAGTGA  
ACCAAATGAGCAGGGTTTCTGCCCTCAGGGAGTTGATAATCTAGTGGGGAAGGTGTTGGG

44584

CTTACTCAGGGGAAGGTGAGCCATTTGTTCTATTGAGGCTCCAACCGATAGGATGTGG  
ACCACCTATGTCGTGGGAGAAATCTGCTTTACTCACTCTGCTAACTTAAATATGAATCCC  
ATCAGAAAGCACCCTCACAGAAGTACCCAGAATAATGTTTGACCAAATATCTAAGCATCC  
TCTGACACAGTCAAGTTGTACATAAAATGAACATCCTAGGCTACTTAGAGTAGTCAGA  
AGATACCTCTCTGACATGGTAACATTTAAACTGAGACCCAAAGAATGGGAAGGAGCCAGC  
[C, T]  
GTGGAAGAATGGGGGACAGGCCTTCCAGGCAGAAAGAACTGAGTGGTAACCGAGTGGA  
ACTGAATGGAACTGGAGTCCAGAGGGAAAAGGGGCATGTTGTGAGATGAAATTAGAGAG  
GGGACAGAGGCTTACTGTGACACCTTGAAGCCATGATAAGGGGCTTGCAATTTATTCT  
AGATGCAACGATGAGAGGCACTGAGTTTGAGCACCTTGAAGCCATGATAAGGGGCTTGC  
ATTTTATTCTAGATGCAGTGATGAGAGGCACTGAAAAGTTTGAGCAAGGAGGAATGTGAG

46250

CCATGATTCAATTACCTCCCCCTGGGTTCTCCCAACACATGGGAATTCTGGGAGATA  
CAGTTCAAGTTGAGACTTGGGTGGGAACACAGCCAAATCATATCACCAGTTTAGTACTT  
CACTATGTTTTTGGCCAATTATGTTGGGTAGGGGATGGTTGTGCTCCTCTGTCCCTTAC  
CTTAGAGCTGGCAGATAAAATACCAGATATCCAGTTAAATTTGAATTTAGAAAACCTTTT  
TAAAAAAGTATAAGTATATCCCAATATTGCATGGGATATACTTACCCTTTAAAAATTTT  
[A, C, T, G]  
TTGCTATTGTTTTTCTGCAATTCAAATTTCACTGGGTGTCTGTATTTTTGTTTCTGAA  
TCTGGTAGCACACATTGAATTGCACCCTTTAAATGGCTAGAATAGGGAATTTTATGTTA  
TGTGCATTGTAACACACACACACACACACACACACACACACACACATCTGGC  
AATTTCTCCCTTAACTAACTACCATGTAGAAGCTACCATGCGATGCAGTCTATTTCTAGG  
TTTAGCCACAAGGGTCAATAAGAAAATCTGACCTCAAAGGAAATTATGTCTGGTGATGGT

FIGURE 3VVV



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46287 ACACATGGGAATTCTGGGAGATACAGTTCAAGTTGAGACTTGGGTGGGAACACAGCCAAA  
TCATATCACCAGTTTAGTACTTCACTATGTTTTTGGCCAATTATGTTGGGTAGGGGATG  
GTTGTGCTCCTCCTGTCCCTTACCTTAGAGCTGGCAGATAAAATACCAGATATCCAGTTA  
AATTTGAATTTTCAGAAAACCTTTTTAAAAAGTATAAGTATATCCCAAATATTGCATGGGA  
TATACTTACCCTTTAAAAATTTTATTGCTATTGTTTATCTGCAATTCAAATTTCACTGGG  
[C, T]  
GTCCTGTATTTTTGTTTCTGAATCTGGTAGCACACATTGAATTGCACCCTTTAAAAATGG  
CTAGAATAGGGAATTTTATGTTATGTGCATTGTAAACACACACACACACACACACACAC  
ACACACACACACACGTATCTGGCAATTCTCCCTTAACTAACTACCATGTAGAAGCTACC  
ATGCGATGCAGTCTATTTCTAGGTTTAGCCACAAGGGTCAATAAGAAAATCTGACCTCAA  
AGGAAATTATGTCTGGTGATGGTTAATGCTTCTACTAAATTCCTTAGAGCATAGGATGC

46566 TGCAATTCAAATTTCACTGGGTGTCTGTATTTTTGTTTCTGAATCTGGTAGCACACAT  
TGAATTGCACCCTTTAAAAATGGCTAGAATAGGGAATTTTATGTTATGTGCATTGTAAAC  
ACACACACACACACACACACACACACACACACACAGTATCTGGCAATTCTCCCTTAACT  
AACTACCATGTAGAAGCTACCATGCGATGCAGTCTATTTCTAGGTTTAGCCACAAGGGT  
CAATAAGAAAATCTGACCTCAAAGGAAATTATGTCTGGTGATGGTTAATGCTTCTACTAA  
[A, C, T, G]  
TTCCCTTAGAGCATAGGATGCTGAGCCCATAGTAGGACCTCATCAAATGCTGGTTTGATA  
GAAATTGCATTGGGGAAAATTAGCAGCTGTTGATAACTGAATGGAAAGAAATGAACTAC  
CCTGGTACCTGTGGTACAACCTTAAAGAACACCATGAAATGGGCCCTCATGGGAGGTTCTCA  
ATGAATTCAGTGGCTGGCACTTTTGGGCATGCTTTTGGGAACCAAGTACTTACTCCATGT  
GCCTGTGAGTTTGGCACCTCTCATGGCAGCCCAAGTGCAACTGGTTTCTGAGGGGCCATT

46653 ATAGGGAATTTTATGTTATGTGCATTGTAAACACACACACACACACACACACACACACA  
CACACACACGTATCTGGCAATTCTCCCTTAACTAACTACCATGTAGAAGCTACCATGCG  
ATGCAGTCTATTTCTAGGTTTAGCCACAAGGGTCAATAAGAAAATCTGACCTCAAAGGAA  
ATTATGTCTGGTGATGGTTAATGCTTCTACTAAATTCCTTAGAGCATAGGATGCTGAGC  
CCATAGTAGGACCTCATCAAATGCTGGTTTGATAGAAATTGCATTGGGGAAAATTAGCA  
[G, A]  
CTGTTGATAACTGAATGGAAAGAAATGAACTACCTGGTACCTGTGGTACAACCTTAAAGA  
ACACCATGAAATGGGCCTCATGGGAGGTTCTCAATGAATTCAAGTGGCGTGGCACTTTTGG  
GCATGCTTTTGGAAACCAAGTACTTACTCCATGTGCCTGTGAGTTTGGCACCTCTCATGGC  
AGCCCAAGTGCAACTGGTTTCTGAGGGGCCATTAAAAATCTCCCAATGGCAGACAACCTCT  
CAGACATGCCTGCAAATTCAGACAGCCAGGCTGATCATCTGCTACTTTAATTGGTTAT

47153 TCTGAGGGGCCATTAAAAATCTCCCAATGGCAGACAACCTCTCAGACATGCCTGCAAATTC  
CAAGACAGCCAGGCTGATCATCTGCTACTTTAATTGGTTATACCAGTTTTTATGCCTTGT  
TTTCTCCTCCTTTCTGTGAGGTGGAGGAAACATAACCACAAGACTGTTTCCAGTGACCTC  
TTCAGAGGCAATTTCCAAGCAATTAAGTATGGGTTGAATCCAAAGTGTATTGATGAATTA  
AATTCTGTTTCTTGGCTGAAGATTCTGTTTCTTGGCTGACACCTGAACTCAAAGGTTAGA  
[T, A]  
TGAATCTATAGGAAAACGGTTTTTCTCTTGTGTTTTCTGTCAGGCTTTGCTGTTTACGA  
AGATCTTGCATCAACACTTAGCATTCACTCACATGGCAAGCTTGCATGTGGTACTTTTCAT  
TCCACATTAATTTAGGGAACCTTACTATGTGCCAGCATTCAATATCCAATTTGTCTTAGA  
TTTTCGAATAGTGTCCCACAATTTTATAACTGGGGAGTTCCTTGAATGGAAATATGTTCA  
CAGTGGCTGCTTAATTGTGACTAACCCATCACATAGAGACTGCTTTGGTAATAGATTGA

47171 ATCTCCCAATGGCAGACAACCTCTCAGACATGCCTGCAAATTCAGACAGCCAGGCTGAT  
CATCTGCTACTTTAATTGGTTATACCAGTTTTTATGCCTTTGTTTCTCCTCCTTTCTGTG  
AGGTGGAGGAAACATAACCACAAGACTGTTTCCAGTGACCTCTTCAGAGGCAATTTCCAA  
GCAATTAAGTATGGGTTGAATCCAAAGTGTATTGATGAATTAATTTCTGTTTCTTGGCTG  
AAGATTCTGTTTCTTGGCTGACACCTGAACTCAAAGGTTAGATTGAACTATCTAGGAAAA  
[C, T]  
GGTTTTTCTCTTGTGTTTTCTGTCAGGCTTTGCTGTTTACGAAGATCTTGCATCAACACT  
TAGCATTCACTCACATGGCAAGCTTGCATGTGGTACTTTTATTCCACATTAATTTAGGGA  
ACTCTACTATGTGCCAGCATTCAATATCCAATTTGTCTTAGATTTTCAATAGTGTCCCA  
CAATTTTATAACTGGGGAGTTCCTTGAATGGAAATATGTTTACAGTGGCTGCTTAATTGT  
GACTAACCCATCACATAGAGACTGCTTTGGTAATAGATTGATTCTGAGGGTCTAGGAGA

FIGURE 3WWW



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Inventors: GUEGLER et al.  
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47216 GACAGCCAGGCTGATCATCTGCTACTTTAATTGGTTATACCAGTTTTTATGCCTTTGTTT  
CTCCTCCTTTCTGTGAGGTGGAGGAAACATAACCACAAGACTGTTTCCAGTGACCTCTTC  
AGAGGCAATTTCCAAGCAATTAAGTATGGGTTGAATCCAAGTGTATTGATGAATTAAT  
TCTGTTCTTTGGCTGAAGATTCTGTTCTTTGGCTGACACCTGAACCTCAAAGGTTAGATTG  
AACTATCTAGGAAAACGGTTTTTCTCTGTGTTTTCTGTCAGGCTTTGCTGTTTACGAAG  
[A, T]  
TCTTGCAATCAACACTTAGCATTCACTCACATGGCAAGCTTGCATGTGGTACTTTTCATTCC  
ACATTAATTTAGGGAACCTCTACTATGTGCCAGCATTCAATATCCAATTTGTCTTAGATT  
TCGAATAGTGTCCCAATTTTATACTGGGGAGTTCTTGAATGGAAATATGTTACAG  
TGGCTGCTTAATTGTGACTAACCATCACATAGAGACTGCTTTGGTAATAGATTGATTCT  
TGAGGGTCTAGGAGAAGGGACACTTCTCATATGGGAAGACGGGATTAATCCTTGAAAT

47484 GTGTTTTCTGTCAGGCTTTGCTGTTTACGAAGATCTTGCATCAACACTTAGCATTCACTC  
ACATGGCAAGCTTGCATGTGGTACTTTTCATTCCACATTAATTTAGGGAACCTCTACTATGT  
GCCAGCATTCAATATCCAATTTGTCTTAGATTTCGAATAGTGTCCCAATTTTATAAC  
TGGGGAGTTCTTGAATGGAAATATGTTACAGTGGCTGCTTAATTGTGACTAACCATC  
ACATAGAGACTGCTTTGGTAATAGATTGATTCTGAGGGTCTAGGAGAAGGGACACTTCT  
[T, C]  
ATATGGGGAAGACGGGATTAATCCTTGAAATGATACTGAAGCCAACCTTCTGTACCAGTA  
TAGCAGCTTAGCAGACTTCTATATGATCCATGTAAGGGTCTGTTTGCTCTCTGAGATTTT  
GGTGCCTTCTCTAGCCCTGAGTGCTGGGCTTCTTCTGAATTCATAGGGGTGGAGGTG  
AAGGTACCGCCAGCTCTCACCAACTCATCCATCCCTGGACAGCAGGATTCTGCTCATC  
ACCTTGGTGCCTCCGATGCCTGAAGCACAATAGGCCCTCAGCAAACATTTGTTGAATCA

47668 GAGTTCCTTGAATGGAAATATGTTACAGTGGCTGCTTAATTGTGACTAACCATCACAT  
AGAGACTGCTTTGGTAATAGATTGATTCTGAGGGTCTAGGAGAAGGGACACTTCTCATA  
TGGGGAAGACGGGATTAATCCTTGAAATGATACTGAAGCCAACCTTCTGTACCAGTATAG  
CAGCTTAGCAGACTTCTATATGATCCATGTAAGGGTCTGTTTGCTCTCTGAGATTTGGG  
TGCTTCTCTAGCCCTGAGTGCTGGGCTTCTTCTGAATTCATAGGGGTGGAGGTGAAG  
[G, A]  
TACCGCCAGCTCTCACCAACTCATCCATCCCTGGACAGCAGGGATTCTGCTCATCACCT  
TGGTGCCTCCGATGCCTGAAGCACAATAGGCCCTCAGCAAACATTTGTTGAATTCATGCC  
ATGAACATTAATCGAGCCCTTTTTATACACTGTGCACTGGGATTGGGACCATGGAAAATT  
TAGAGAGGAAAAGGTCCACCTTCAAGGGGCATCTAGAGGAACTTATCCTCTAGCAGGAGA  
AATTGCTAATGAGAAAAGGTATTTTGGGGAGTGGAGTGAGGTGTTGGTCTAGCTGGCAGG

47698 GGCTGCTTAATTGTGACTAACCATCACATAGAGACTGCTTTGGTAATAGATTGATTCT  
GAGGGTCTAGGAGAAGGGACACTTCTCATATGGGGAAGACGGGATTAATCCTTGAAATG  
ATACTGAAGCCAACCTTCTGTACCAGTATAGCAGCTTAGCAGACTTCTATATGATCCATGT  
AAGGGTCTGTTTGCTCTCTGAGATTTTGGGTGCCTTCTCTAGCCCTGAGTGCTGGGCTT  
CTTCTGAATTCATAGGGGTGGAGGTGAAGGTACCGCCAGCTCTCACCAACTCATCCAT  
[C, T]  
CCTGGACAGCAGGGATTCTGCTCATCACCTTGGTGCCTCCGATGCCTGAAGCACAATAGG  
CCCTCAGCAAACATTTGTTGAATTCATGCCATGAACATTAATCGAGCCCTTTTTATACAC  
TGTGCACTGGGATTGGGACCATGGAAAATTTAGAGAGGAAAAGGTCCACCTTCAAGGGGC  
ATCTAGAGGAACTTATCCTCTAGCAGGAGAAATTGCTAATGAGAAAAGGTATTTTGGGGA  
GTGGAGTGAGGTGTTGGTCTAGCTGGCAGGTTACGCTATGCTCAGTGGCTCTCTGGTAT

48029 TGGTGCCTCCGATGCCTGAAGCACAATAGGCCCTCAGCAAACATTTGTTGAATTCATGCC  
ATGAACATTAATCGAGCCCTTTTTATACACTGTGCACTGGGATTGGGACCATGGAAAATT  
TAGAGAGGAAAAGGTCCACCTTCAAGGGGCATCTAGAGGAACTTATCCTCTAGCAGGAGA  
AATTGCTAATGAGAAAAGGTATTTTGGGGAGTGGAGTGAGGTGTTGGTCTAGCTGGCAGG  
TTCAGCCTATGCTCAGTGGCTCTCTGGTATGGAATTTCTCAGAAATGTTGATTAGCCA  
[A, T]  
AGATTCTCTGGCAGCACTGACTCTTGCCCTTCTCGGCCACATTTTATTTCCCAAACCT  
AGGTGTTACTGGGAAGAGACTGAGCTGTTTTATTGAAGATAATTGACTTTCCAGTTTTT  
AAGTAAGTCTGTTGATTCTCGAAGACTTCACTAATCAGAGTTATGAATATTTCAAAAAC  
ACTTCCAGTCTTCAGATGAATGGATTTGTAGGTTTTCTACATTGCTGTCTCCCTAGCCC  
CATGAGGAATAATGTGGGTATCCTTTTCCCTTTTAGGTTTCTCTCTTCTAACCTGCG

FIGURE 3XXX



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Title: ISOLATED HUMAN TRANSPORTER...

49334

TGAGGCTGCCTGGTTTCTGTAGCAGTGTTTCCAGGCTGTGACTCTGAGCAGAGAGAAGG  
AATATTATACAGGGATATTTCCAGGTAGCTCCAGGAAAAGACAAAAGGGGAGGAAGTTGA  
GTCTGTAGCTAAAGAGCAGTGTTGAATATGGGATCCAAGTTGGGTGGAGAAGAGAAAAGA  
GAACACAGGGAGGGTAGGATGACAGGAGAAAGTAGAGGCAGGGTATGATGTGGGAGCGAT  
GAGGGTAGCAAGCTGGAAGAGAGGATGATCTAGTCAATGTCTTAGTGTGCCTTAGGGCT  
[A, G]  
CTATAATGAAATACCATAGACTGAGTAGCTTTTGCACAACAGAAATTTATTTCTCATGGT  
TCTGGAGGCTGGGAAGATCAAGATATCAAGGCAGATTTCAGTGTCTGGCAAGGATCTGGTA  
CCTGATTGACAGACAGCTGTCTTCTGCTGTGTCTCACTCGGTGGAAGGACCAAGAGAT  
CTCTCTGGGTTCTCTTTTATAAGGGCATGAATCCAATTCATGAGGGCTCAGCCCTCACCA  
TCTAATCACCCCCCAAAGCCCCCACCCTCCTAATCCCATCACATTGAGGGTTAGATTTCAG

49680

TTTATTTCTCATGGTTCTGGAGGCTGGGAAGATCAAGATATCAAGGCAGATTTCAGTGTCT  
GGCAAGGATCTGGTACCTGATTGACAGACAGCTGTCTTCTGCTGTGTCTCACTCGGTG  
GAAGGACCAAGAGATCTCTCTGGGTTCTCTTTTATAAGGGCATGAATCCAATTCATGAGG  
GCTCAGCCCTCACCATCTAATCACCCCCCAAAGCCCCCACCCTCCTAATCCCATCACATTG  
AGGGTTAGATTTTCAGTGTGTGAATTTTGGGGGACACAAAATTCAGACCGTAGCAGTAAT  
[C, G]  
GCTTCAACTGAGTATTGAGACAGTTCTTGTGGTAACAAGGTTTAGGGTGTGGCCATAGGG  
AGACTCAGCTGTAGTGGAGCTGTTGGGGCTGTGCCAAGGTCACCCAGATCCGTTTGTTC  
TGTGCACCTGCTCTTCTAGCTTCTGGGGCTTCTCTCTTCTGGCCTGTACCTACAGCCTT  
TTTCAGAGGACTCTCTTGGTCTACCGGAGCCTATTTTCAGGATGTCTCCTAGGAGTTTTC  
TGAGATGGAGTCTCCCTCTGTGCGCCAGGCTGGAGTGCAGCGGCACAATCTCAGCTCACT

50056

GGAGCTGTTGGGGCTGTGCCAAGGTCACCCAGATCCGTTTTGTTCTGTGCACCTGTCCTT  
TAGCTTCTGGGGGCTTCTCTCTTCTGGCCTGTACCTACAGCCTTTTTCAGAGGACTCTC  
CTTGGTCTACCGGAGCCTATTTTCAGGATGTTCTTAGGAGTTTTTTCAGATGGAGTCTCC  
CTCTGTGCGCCAGGCTGGAGTGCAGCGGCACAATCTCAGCTCACTCCAACCTCCACCTCC  
TAGGTTCAAGCCATTCTCCAGCCTCAGCCTCCCAAGTAGCTTAGATTACAAGCATGCACC  
[A, G]  
CTATGCCTGGCTAATTTTTTTTTTTTTTTTTTTTTTTTGTATTTTTCAGAGCTGGGACT  
TCGCCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCTCAGGTGATCCCCTGCCTCGGCC  
TCACAAAGTGCTGGGATGACAAGCATGAGCCACTGCGCCTGGCCATCCTAGGAGTTTGTA  
TCACCCACTCCTTCACGGTTTGTCTGGAGGGATCTCCTAAATAAATAACTCACAAACAAA  
TTCTCATCCGGATCTGCTTCTGGGATACCTGCCCTGAGTTAGTGGTTGAGATGGAATGG

51020

AGGGGCCCTGAAGAGGCTGGGGGCATGAGGGAGTCTTCAGATCTTCAGAGGGGGCCCTG  
AGGCATCTTTGGAATGGTTTGGGGTAGGGGTGAGGGGAAGGTTGGATCAGAGGGGAGGAG  
GCTGAGAGCAGAAGAGAGAACAAGCTACACCAAGTGGCCTCACTGGCCTCACACTTCTC  
AGAATTGGTCCCTTCAGACCCGGTGGTGGGTGGCTTGGCAGCCTGGATGTGGGGTGTGGA  
GATTGGTACTACTCTGGCACACAGGGGGCATGCATTGGTTGAATAAACAATGAATGAC  
[A, T, G, C]  
CATCAAGTTTGTAGATGCCCCACCTTTTTCATCATTTCTGAACCATTGTCACTTCCATGTAT  
TTTATGGTCTGATAAATATGGAATTAATCGAAGTACCTCTAGCTATTTGTTATCACCATT  
ATTGGGTGGGACACAGCGAACAGATTCTTAAAGCTAGGGAATTATGCAATAGGACATGT  
TACGGACTTAAGCCATAAGATCCTTTTTTTTTTTTTTTTTTTTTTTTATAGATAGA  
GTCTCACTCTGTACCCAGGCTAAAGTGCAGTGGTGAATGTGACTCACTGCAACCTCC

53750

ATGTCTTTCTGTCCCCACACCTCTGTCAAACACAGCATCTGCACGCTTTGTTGCATTG  
CTTGATAGAACACGTAGTTTCTTACCTCCTAATAATGTGGACAGCTCACGTTGATTG  
AGGACTTGCTTTGAACAAGGCATTGAGCAACATGCCGTACATTTTATGTTAAATCTTCCC  
AATAGTGCTACTGCTTCTGTCCCTTTCCAGGGAGGAGGAAGGAGGCTTGGAGAAGGGACT  
GTCTTTTAGGAGCCCTGCCAGTGTTCCTGTGGAGGGTGGGGCCATCGTGGAAGACAGA  
[G, T, C]  
CTATGGTAGGGGTAAAGCTGGGTGGCTGTTGAAGTCCAACCTTCCCCCTTCTTCTCTAAC  
CCTGATAACCTTGTCTCTGGGGCTGTCTGCTAGTGGAGAGGCTTCTGACTTTTTTTTTT  
TTTTTTGCCATACCTTTGGTTTATAAATAACAAGAAGAGATTGGGGGAAAATCAGGGGAA  
ACTGTGAGCTTACAAGTCCCAGAGGAAGTCACTGCTCCTTTAAGTCTCATGTGAACC  
CCTTGTCTCTCCCCAGCTTGTGGGGTGAAAGAAAAGCCCTTTAGTCTTTTGGGTCTCA

FIGURE 3YYY



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53753

TCTTTCTGTCCCCACACCTCTGTCAAACACAGCATCTGCACGCTTTGTTGCATTTGCTT  
GCATAGAACACGTAGTTTTCTTACCTCCTAATAATGTGGACAGCTCACGTTGATTGAGG  
ACTTGCTTTGAACAAGGCATTGAGCAACATGCCGTACATTTTATGTTAAATCTTCCCAAT  
AGTGCTACTGCTTCTGTCCCTTTCCAGGGAGGAGGAAGGAGGCTTGGAGAAGGGACTGTC  
TTTAGGAGCCCTGCCAGTGTTCCTGTGGAGGGTGGGGCCATCGTGGAAGACAGACCT  
[A, T, C, G]  
TGGTAGGGGTAAGCTGGGTGGCTGTTGAAGTCCAACCTTCCCCCTTCTTCTCTAACCTT  
GATAACCTTGTCTCTGGGGCCTGTCTGCTAGTGGAGAGGCTTCTGACTTTTTTTTTTTT  
TTTGCCATACCTTTGGTTTATAAATACAAGAAGAGATTGGGGGAAAATCAGGGGAACT  
GTCGAGCTTACAAGTCCCGAGAAGGAAGTCACTGCTCCTTTAAGTCTCATGTGAACCCCT  
TGTTCTCTCCCCAGCTTGTGGGTGAAAGAAAAGCCCTTTAGTCTTTTGGGTCTCAAAT

53799

TGTTGCATTGCTTGCATAGAACACGTAGTTTTCTTACCTCCTAATAATGTGGACAGCT  
CACGTTGATTGAGGACTTGCTTTGAACAAGGCATTGAGCAACATGCCGTACATTTTATGT  
TAAATCTTCCCAATAGTGCTACTGCTTCTGTCCCTTTCCAGGGAGGAGGAAGGAGGCTTG  
GAGAAGGGACTGTCTTTAGGAGCCCTGCCAGTGTTCCTGTGGAGGGTGGGGCCATCG  
TGAAGACAGACCTATGGTAGGGTAAGCTGGGTGGCTGTTGAAGTCCAACCTTCCCCCT  
[C, A, T]  
CTTCTCTAACCTTGATAACCTTGTCTCTGGGGCCTGTCTGCTAGTGGAGAGGCTTCTG  
ACTTTTTTTTTTTTTTGGCCATACCTTTGGTTTATAAATACAAGAAGAGATTGGGGGAA  
AATCAGGGGAACTGTGAGCTTACAAGTCCCGAGAAGGAAGTCACTGCTCCTTTAAGTC  
TCATGTGAACCCCTTGTCTCTCCCCAGCTTGTGGGTGAAAGAAAAGCCCTTTAGTCTT  
TTGGGTCTCAAATCACAGTTTATGCAGTTTGGCCCCAGTCAGAGGGACCCAGGAAGGC

53917

GTTAAATCTTCCCAATAGTGCTACTGCTTCTGTCCCTTTCCAGGGAGGAGGAAGGAGGCT  
TGGAGAAGGGACTGTCTTTTAGGAGCCCTGCCAGTGTTCCTGTGGAGGGTGGGGCCAT  
CGTGAAGACAGACCTATGGTAGGGTAAGCTGGGTGGCTGTTGAAGTCCAACCTTCCCC  
CTTCTTCTCTAACCTTGATAACCTTGTCTCTGGGGCCTGTCTGCTAGTGGAGAGGCTT  
CTGACTTTTTTTTTTTTTTGGCCATACCTTTGGTTTATAAATACAAGAAGAGATTGGGG  
[C, T, G]  
AAAATCAGGGGAACTGTGAGCTTACAAGTCCCGAGAAGGAAGTCACTGCTCCTTTAAG  
TCTCATGTGAACCCCTTGTCTCTCCCCAGCTTGTGGGTGAAAGAAAAGCCCTTTAGTC  
TTTTGGGTCTCAAATCACAGTTTATGCAGTTTGGCCCCAGTCAGAGGGACCCAGGAAG  
GCAGACTCAGGGTAAATTCTGCCTGTCTTCCACCAGAGAGGGGACTCACCAAGTGTGACT  
CATGCCATTCAATAGAATTTTTAAATCTCACAAAGTATTTGTACCCCTGAGTAAAAGAG

54056

GTAGGGGTAAGCTGGGTGGCTGTTGAAGTCCAACCTTCCCCCTTCTTCTCTAACCTTGA  
TAACCTTGTCTCTGGGGCCTGTCTGCTAGTGGAGAGGCTTCTGACTTTTTTTTTTTTTT  
TGCCATACCTTTGGTTTATAAATACAAGAAGAGATTGGGGGAAAATCAGGGGAACTGT  
CGAGCTTACAAGTCCCGAGAAGGAAGTCACTGCTCCTTTAAGTCTCATGTGAACCCCTTG  
TTCTCTCCCCAGCTTGTGGGTGAAAGAAAAGCCCTTTAGTCTTTTGGGTCTCAAATCA  
[C, T]  
AGTTTATGCAGTTTGGCCCCAGTCAGAGGGACCCAGGAAGGCAGACTCAGGGTAAATTC  
TGCTGTCTTCCACCAGAGAGGGGACTCACCAAGTGTGACTCATGCCATTCAATAGAATT  
TTTAAAATCTCACAAGTATTTTGTACCCCTGAGTAAAAGAGAGGCTTGTAGCTCTTCATG  
AAGGAACAAGAAAGGCCCAACTGAGTGTGGAGCCAGTGAAGTAAATACTGCCCTG  
TCTCTGTCTGTCCACTCTAGCGCTTGTACAAACCATGAAGAACTCTCTTGGACTGTTT

54402

ACTCAGGGTAAATTCTGCCTGTCTTCCACCAGAGAGGGGACTCACCAAGTGTGACTCATG  
CCATTCAATAGAATTTTTAAATCTCACAAGTATTTTGTACCCCTGAGTAAAAGAGAGGC  
TTGTAGCTCTTCAAGAAGCAAGAAAGGCCCAACTGAGTGTGGAGCCAGTGAAG  
TAAATACTGCCCTGTCTCTTGTCTGTCCACTCTAGCGCTTGTACAAACCATGAAGAACT  
CTCTTTGGACTGTTTGTCTTTTGAAGAATGTTAACACCTTGACTCTGGATTCTGCCTATG  
[G, A]  
GAAAAAACCACAATAGTGCCAGGGGTGCTTCCATATGCAGGATTAACTCTGCAGTCAAAG  
TTTCTGTTGGGCAGGTGTGTGAACCTTGATATCATAAATGCTGGCCCAAAGCAAATGGGAG  
AATGGATGAATGAACAAATTGAGGAATGAAACAACTGTAACCAGGGGTCTCCTAGTTGT  
AGGTCTCTGCTAAACTTCATATTGAGACACAAAGGAAGGGCATCTTATAATATAATGTT  
GGGGATGAGCAGTCAGCTTGGAGGTGGGGACCGTAAGGTGGGTTTTGTATGTTTGAAG

FIGURE 3ZZZ





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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

54493 TATTTTGTACCCCTGAGTAAAAGAGAGGCTTGTAGCTCTTCATGAAGGAACAAGAAAGGC  
CCGAACTGAGTGTGGAGCCAGTGAAGTAAATACTGCCCTGTCTCTTGTCTGTCCAC  
TCTAGCGCTTGTACAAACCATGAAGAACTCTCTTGGACTGTTTGTCTTTTGAGAATGTT  
AACACCTTGACTCTGGATTTCTGCCTATGGGAAAAAACCACAATAGTGCCAGGGGTGCTT  
CCATATGCAGGATTAACCTCTGCAGTCAAAGTTTCTGTTGGGCAGGTGTGTGAACCTTGATA  
[G, A, T]  
CATAAATGCTGGCCCAAAGCAAATGGGAGAATGGATGAATGAACAAATTCAGGAATGAAA  
CAAACCTGTAACCAGGGGTCTCCTAGTTGTAGGTTCTCTGCTAAACTTCATATTGAGACAC  
AAAGGAAGGGCATCTTATAATATAATGTTGGGGGATGAGCAGTCAGCTTGGAGGTGGGGA  
CACGTAAGGTGGGTTTGTATGTTTGAAGAAGTAATGACCAAAAAAAGAGTCAAGAGGTGA  
GAAGAATCTGGGAAGTGAGACCTGTTTCTCTGGGACAGGTGTGAGCGGGTCTGGGTGCTG

54749 CTCTGCAGTCAAAGTTTCTGTTGGGCAGGTGTGTGAACCTTGATATCATAAATGCTGGCCC  
AAAGCAAATGGGAGAATGGATGAATGAACAAATTCAGGAATGAACAAACTGTAAACAGG  
GGTCTCCTAGTTGTAGGTTCTCTGCTAAACTTCATATTGAGACACAAAGGAAGGGCATCT  
TATAATATAATGTTGGGGGATGAGCAGTCAGCTTGGAGGTGGGGACGTAAGGTGGGTT  
TTGATGTTTGAAGAAGTAATGACCAAAAAAAGAGTCAAGAGGTGAGAAGAATCTGGGAAG  
[T, C]  
GAGACCTGTTTCTCTGGGACAGGTGTGAGCGGGTCTGGGTGCTGCTGGGTTTGGCTGGGG  
CAAAGGTTGCTTGTGGGGGCGTGGCAGTGGGTGAGGCCTGTGAGATAGGCAGGCGCCAGG  
TCTTGGGAAGGAGAGCTCAGGGAGCAAGGCATGGAGCCTGCACTTTACTCTGAATGTGGT  
GGCGCCTTCAGAGCATTGTTAGCAGGGGTCCATGTGATCACACTGACACCTGAGAGAGTG  
ACACACCATGTACATGGCTGGTATATGGAGGATGGATTAAAGGGGGACAGGACTGAAGGC

55396 GACAGGAAAGCACAGATGTGAGATGAGGTGGCAGGCAGTTCTAGCTCCCTCTTCCCCCA  
GTCTGCCTTGTTCCTCTTCTCATGGCTCCATAGGGTCTCAGTCATTTTCATCATAGCTT  
GATCTCTTCCATCTGGAAGTGCAGCCTGAAATTTTGAAGACAGCAGGGAGCAATGCTTCA  
CCCAAAGGGAGAGCCTCGGGTGGCGTTTGGGACCATGGCTTGCTCTCTTAGTGATACATA  
GACTTAGTGTTACTGCCATTCTTACTGGGATCAGCTTGATTGCCTTTAAGGTAGGGCTGT  
[-, C]  
CATGGAAACAGGGAAAACATGATTGGTTGTTTGGGTATCTGGAACCAGAGGCAGCACAG  
ATACTGCTCTAAGAGCTGCTGGGACAACTGGAGGCCGGTGTGGGTGGAGCACCCGAGGTG  
GAATCCTGCGCTCCTCATCTTTCCTGCCCTCTTCTTAACACCCTCCCTCCCCAGCGGCCT  
GAAGTCTGCCTATGCCTATGCAGGCTGAGCTGTAACCTGGGACTCTTTGGAAGCTCTGAG  
CCATCAGTGCAGGTGGCCCCGGAATGATTCCAGACCTAGAGTAGGGGTGGGAGGTGCGCT

55397 ACAGGAAAGCACAGATGTGAGATGAGGTGGCAGGCAGTTCTAGCTCCCTCTTCCCCCAG  
TCTGCCTTGTTCCTCTTCTCATGGCTCCATAGGGTCTCAGTCATTTTCATCATAGCTTG  
ATCTCTTCCATCTGGAAGTGCAGCCTGAAATTTTGAAGACAGCAGGGAGCAATGCTTCAC  
CCAAAGGGAGAGCCTCGGGTGGCGTTTGGGACCATGGCTTGCTCTCTTAGTGATACAG  
ACTTAGTGTTACTGCCATTCTTACTGGGATCAGCTTGATTGCCTTTAAGGTAGGGCTGTC  
[-, C]  
ATGGAAACAGGGAAAACATGATTGGTTGTTTGGGTATCTGGAACCAGAGGCAGCACAGA  
TACTGCTCTAAGAGCTGCTGGGACAACTGGAGGCCGGTGTGGGTGGAGCACCCGAGGTGG  
AATCCTGCGCTCCTCATCTTTCCTGCCCTCTTCTTAACACCCTCCCTCCCCAGCGGCCTG  
AAGTCTGCCTATGCCTATGCAGGCTGAGCTGTAACCTGGGACTCTTTGGAAGCTCTGAGC  
CATCAGTGCAGGTGGCCCCGGAATGATTCCAGACCTAGAGTAGGGGTGGGAGGTGCGCTG

55703 AACAGGAAAACATGATTGGTTGTTTGGGTATCTGGAACCAGAGGCAGCACAGATACTG  
CTCTAAGAGCTGCTGGGACAACTGGAGGCCGGTGTGGGTGGAGCACCCGAGGTGGAATCC  
TGCGCTCCTCATCTTTCCTGCCCTCTTCTTAACACCCTCCCTCCCCAGCGGCCTGAAGTC  
TGCTATGCCTATGCAGGCTGAGCTGTAACCTGGGACTCTTTGGAAGCTCTGAGCCATCA  
GTGCAGGTGGCCCCGGAATGATTCCAGACCTAGAGTAGGGGTGGGAGGTGCGCTGCGGG  
[A, C]  
GGGGGGAGGTGAGAGGAGGCTGTCCTTTCCCTCTTGCCCGGAGTCTGCAGTCACAGTTG  
CACTTGTGCTGGGTGAGTAGCAGAGTCACGCTGCTGTGTGACAGTGGCACTGAGGCAGCT  
GCATTTAGGTTTCCAAGAGACTCTGAACCCTTGAATGCCATTTGTTTTCAGGTGACATG  
GAGGAATGGAGGCACTCGGGTTAAGTGTCTGAAGATGGATTCAAGGATGCCCCCTGCTGT  
TAGCTTGTATAGGTTGCTCAGTGTCCCCTCTCTGGCCCGTAGTTTCTCATCTATCAAT

FIGURE 3AAAA



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55783 ACTGGAGGCCGGTGTGGGTGGAGCACCCGAGGTGGAATCCTGCGCTCCTCATCTTTCCTG  
CCCTCTTCTTAACACCCTCCCTCCCCAGCGGCTGAAGTCTGCCTATGCCTATGCAGGCT  
GAGCTGTAACCTGGGACTCTTTGGAAGCTCTGAGCCATCAGTGCAGGTGGCCCCGGAATG  
ATTCCAGACCTAGAGTAGGGGTGGGAGGTGCGCTCGGGGCGGGGGAGGTGAGAGGAGG  
CTGTCTTTCCCTCTTGCCCGGAGTCTGCAGTCACAGTTGCACTTTGCCTGGGTGAGTA  
[G, A]  
CAGAGTCACGCTGCTGTGTGACAGTGGCACTGAGGCAGCTGCATTTAGGTTTCCAAGAG  
ACTCTGAACCCTTGAATGCCATTTGTTTCAGGTGACATGGAGGAATGGAGGCACTCGGG  
TTAAGTGTCTGAAGATGGATTCAAGGATGCCCCGCTTGTAGCTTGTATAGGTTGCTC  
AGTGTCCCCTCTCTGGCCCGTAGTTTCTCATCTATCAATGGGGGCAGATAATAATCATC  
ACCTTACACAGAAGGTTTGGCGAAGATAAAAACAGGTTCACTGGCTGGGTGCAGTGGCTC

55806 CACCCGAGGTGGAATCCTGCGCTCCTCATCTTTCTGCCCCTCTTCTTAACACCCTCCCTC  
CCCAGCGGCTGAAGTCTGCCTATGCCTATGCAGGCTGAGCTGTAACCTGGGACTCTTTG  
GAAGCTCTGAGCCATCAGTGCAGGTGGCCCCGGAATGATTCCAGACCTAGAGTAGGGGTG  
GGAGGTGCGCTGCGGGGCGGGGGAGGTGAGAGGAGGCTGTCTTTCCCTCTTGCCCGGG  
AGTCTGCAGTCACAGTTGCACTTTGCCTGGGTGAGTAGCAGAGTCACGCTGCTGTGTGAC  
[A, C]  
GTGGCACTGAGGCAGCTGCATTTAGGTTTCCAAGAGACTCTGAACCCTTGAATGCCAT  
TTGTTTCAGGTGACATGGAGGAATGGAGGCACTCGGGTTAAGTGTCTGAAGATGGATTCA  
AGGATGCCCCCTGTGTTAGCTTGTATAGGTTGCTCAGTGTCCCCTCTCTGGCCCGTAG  
TTTCTCATCTATCAATGGGGGCAGATAATAATCATCACCTTACACAGAAGGTTTGGCGA  
AGATAAAAACAGGTTCACTGGCTGGGTGCAGTGGCTCATACTTGAATCCAGCACTTTA

57433 GAAGTAGTCAATCTCATAGACTGGAAAAATTTTTTAATGCCTATTTGAAACAAATGTCGT  
TCCTATTTTTTGGGATAAAAGGGCCCTTTCCCCCTGGAATTGCTATGTTTCTCTTTTCC  
TGTTCTTACACTCTGCAGAACTGACTTTGAAGTCAGATGATTCCCTTTTAACTGCGCTT  
CTCGCTTTTGGGCGGCTTAACCTTGACTTAGCCATTGAACCTGTCTGGGTCTCAGTTTCT  
TTGTCTGTGAAGTGGGGCTGTGTTGGGCATGAGCATGCGCCTACAGGCCTCTAACTGGAG  
[G, T]  
GGGTGTTGGTGATCAGGGCCCTGGCTGCTGCCCTGATCTCCACAGCTGGGCTTGCACTGC  
GGGTACGTTGCTCCCGGGCTGCTCCAGCCAGTGTCTGTGCGCAGCAAGGATACACGGC  
AGGATTGTTTCTGGGAGACACAGGACTCCTCAGACAGCTAACTTCAGCTCAAGAACTCCT  
TGATGGGCTTGCTAACTTCTTAGGCTGGAAGATGCTTACCTCCTCCTTCTTCTTCC  
TTCTTTTCCAGGGTGCAGACTTACTTAGAGTCTAGTGGCTGTTCTAGCCTCCCCAACTC

57699 GCATGAGCATGCGCCTACAGGCCTCTAACTGGAGGGGTGTTGGTGATCAGGGCCCTGGC  
TGCTGCCCTGATCTCCACAGCTGGGCTTGCACTGCGGTACGTTGCTCCCGGGCTGCTCC  
CAGCCAGTGTCTGTGCGCAGCAAGGATACACGGCAGGATTGTTTCTGGGAGACACAGGA  
CTCCTCAGACAGCTAACTTCAGCTCAAGAACTCCTTGATGGGCTTGCTAACTTCTTAG  
GCTGGAAGATGCTTACCTCCTCCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT  
[T, A]  
TAGAGTCTAGTGGCTGTTCTAGCCTCCCCAACTCCCTATCATTTTCTCTCACACATGCGT  
TCCCCCTAATAAAATCCATGCACATTAAATCCCTTCTTGGCATCTGCTTCTGGGGTCTCT  
ACCTGGACTCATGCAGTGTGATAATTCTTGTAGTGAGGACCGAATGTAGTGATGTAAGC  
AGAGTGTGTTGTGAGAGTGACAGCATGAGTAAGTGCCAGTAGGCCATCAGGGCTCCTGTC  
ACCTTACCACCATCAGCACCACCATCCTCATCACCATCTGGCCAAGTTTGCTTCTTTGT

60173 TTAATGGACTIONCAGTTCATATGGCTAGGGAGGCCTCACAATCATGGTGGAGGGTAAAT  
GAGGAGCAAAGTCACATCTTACATGGCAGCAGGCAAGAGAGCATGTGCAAGGGAACCCAC  
CTTTATAAAACCATCAGATCTTGTGAGACTTATCACTATCACGAGAACAGCACGGGGAA  
AAACCTGCCCCATGCTTCAATTACCTCCACGGGGTCACTCCCCCAAGATGTAAGGATT  
ATGGGAATAACAATTAAGGTGAGATTGGGTGGGGACACAGCCAAACCATATCAGGAAAT  
[C, G, A, T]  
TGAACATAAGGAGGCGAGATTCAATTTCTGGGGCTTCCGTAGCAAATTGCCACACATGTA  
GTGGCTTAAAGCAGCACTAATTTATTATTGTATGGTTCTGGAAGTCAGAAGTTCAAATC  
AGCCTCACTTGGCCAAAATCAAAGAGTAAGCAGTACAGGTTCTTCCGGAGGCTCTAGGG  
GAGGATCCTTCCCTTGCCCTTTTCCAGCTTCTAGAGGGACCAATTCCTGGGCTCATGGCT  
GCATCACTCCAACCTGTGTATCTGTCTCATATCCCTTCTCTCTGCGCCCTCCTGCTTC

FIGURE 3BBBB



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62216 CACATTGTTTTCAACAAGGAAGCTAAGGGAGGAGGTGAATTATAAAATGGCAGAGAGATAGC  
TTTCAATTTGGACCCCTCGTAGAAAAATGTAAGTATTTCAAACCTCAGTTTATACTTTTTTT  
TTTTTTAAACTGGGACCCCTGGTGCTTATTTTTTAGAACTCAAATGGGTACCTAGCAACT  
GATCAAATTCCTTAACCTGCAGGCTTGGTGAACCAGCGTTTCATCCTCACATTTGAAAGCT  
GGCTCAAAGAAGACATCTGTGCTTTGTTTCTGACACGTTTGTATTATTATAAACAAA  
[C, A]  
TCTCTTCTTTTGTCCCCACCCTGACTCCTCAGTGGCCGTTCCCGCAGCAGCACCCGT  
GTGCCAGCCCAAGAGCGCCACTAACGGGCAACCCCGGCTCCGGCTCCGACTCCAACCTCC  
GCGCTGTCCATTTCTCCGAGCCACAGTGGTAGCCAGGATGGAAGGCACCTCCCAAGG  
GGGCTGCAGACCGTCATGAAGTGAAGACGGTGGTGGCATCTTTGTGGTTGTGGTGGT  
CTACCTGTCACTGGCGGTCTTGTCTCCGGGCATTGGAGCAGCCCTTTGAGAGCAGCCA

62830 GCCTTGGAGAAGGCGGAATTCTGCGGGATCATGTCTGTGTGAGCCCCAGGAGCTGGAG  
ACGTTGATCCAGGTGAGCAGGGAGTGAGTCCATCTTAGGCCAGCTGGTGGGGTGGATGGC  
AGTGTGGTTTTATCTTTCTGGGTCTCTAGTCTTGCCCTTCAGTTGAGAGGCTCTTGGTGG  
TCAGGGAAGTTCTCTCCAGGGAGGTGACATGTGAGCTGAGACCTCCAAGAAGCGATAGTG  
AGGCATGTGACAGTGTGGGGGAAGGAGGGTCCATGTTCTGCATCTGGTTTTGGATGAGTG  
[G, C]  
TCAGAGGCGGCAGCAGGCCAATGGACTTTGGATTTTCAAGTTCAAGTCCACCTATGTGTG  
CTGATTAACCTCCTTGATTCTGAACCTGTGGAATGCTGGGATAGAACC CGAAGAAGGAAA  
GAATTTTAAATATGAGATTTAGAATAAGCAGGGATATATTAACCTGTCCAAGGTCCATG  
AGGATGAGGTAGAGAAGAGGCCACCAGGTATGTGGGTGAAGAGGCTGTCACTGGCCTGAG  
ACAGCTGTTATAGTGGATTTATGGGGATGAAATAATATGGATCACAGTAGTAGTAATCAT

63395 GGATGAAATAATATGGATCACAGTAGTAGTAATCATCAGGTTTGCTGTTTTTGAATACTT  
ACTGTGTATCAGGCACTGTACTAAGGCCCTTACATACCCTGGATATTAAGGAAAAAGAT  
TCTTAGGAAAATGGAAGCAGAGAACTTGAACCTGCAGCCTAAAGAAGCAAGGCAACACTTC  
TGGGCGACAGATGTGACTTGGCAGGGGTGGACTGTGGCGGTAAGGAGCTATAGGAAAGC  
CAGAGAGTCATCTGTGGGCTGCGGTGCGAGGGACTGGATCAGGAGGGTGTGAAGTCTG  
[G, A]  
GAAGCCAGAGAGAAAAGCAGTTCCCACGAGGAAGAAAGGGAAATGGTGGAGAGCCCTGTT  
GGAGGGCTTCACCTTGGACGTGAAGGAGGAAGGCTGCCTCTGAGGCTGAAGTTCCACTTT  
CTATCCAGACACCCCTCCTGAACCTACAAAGAGTGGGTTTTGGTGGAAAGGCGGTGACATTT  
ATGGAGGTGAGGAGAGTCTCATCTTTCTGGGGCTCTAAAGTTTGAAGGTGGAGGGAT  
GGAAAAGACAGCTTTTACAATTCCTTCTGGCTCTGGAAGATGCACATTAAATCTAATGG

64019 GGATTTACCAGTCTGCGCTGTTTTCTTATTTATTTATTTCTTACCATACCAATAGAGTAG  
GGGAATCTGATGCTGCTTATGATCTGGCACCTTCATAGCAATCATATCTTGTGCTAGTTA  
GTTTTAATAATGACTTGACTCTTAAATAAATAGAAATACAAATCTTCCCTTCTCTGGGAG  
TAAATATGATTTTCATAGCTATGCCCTATAATTCTTCTCAAAAAAATAAAATGTTAAAAAT  
CCAAGGCGAGCATTTTCATATAAGTGTTCATAGGAAGTCAGTTCTCCAAATGGCTTTGTCT  
[T, -]  
TTTTTTTTTTTTCTTTTTCTTTTTTGAGACAGGGTCTCATTCTGTCACTTAGGCTGGAGTG  
CAGTGGTGTGATCATGGCTCATTGCAGGTTCAACTTCCTGATCGAGGTATCAGCTGATCC  
TTCTGCCTCAGTCTCCTGAGTAGCTGGGACTACAGGCATGTGCCACCATGCCTGGCTACT  
TTTTGCATTTTTTTGTAGAGACAGGTTTTACCATGTTGCCAGGCTGGTCTTGAATTCC  
TAGGCTCAAGCAATCAACCCGCCTTGGCCTCCTAAAGTGCTGGGATTACAGGTGTGAGTC

64030 TCTGCGCTGTTTTCTTATTTATTTATTTCTTACCATACCAATAGAGTAGGGGAATTCTGA  
TGCTGCTTATGATCTGGCACCTTCATAGCAATCATATCTTGTGCTAGTTAGTTTTAATAAT  
GACTTGACTCTTAAATAAATAGAAATACAAATTCCTCCCTTCTGGGAGTAAATATGATT  
TCATAGCTATGCCCTATAATTCTTCTCAAAAAAATAAAATGTTAAAAATCCAAGGCGAGC  
ATTTTCATATAAGTGTTCATAGGAAGTCAGTTCTCCAAATGGCTTTGTCTTTTTTTTTTT  
[T, -]  
CTTTTTCTTTTTTGAGACAGGGTCTCATTCTGTCACTTAGGCTGGAGTGCAGTGGTGTGA  
TCATGGCTCATTGCAGGTTCAACTTCCTGATCGAGGTATCAGCTGATCCTTCTGCCTCAG  
TCTCCTGAGTAGCTGGGACTACAGGCATGTGCCACCATGCCTGGCTACTTTTTGCATTTT  
TTTGTAGAGACAGGTTTTACCATGTTGCCAGGCTGGTCTTGAATTCCTAGGCTCAAGC  
AATCAACCCGCCTTGGCCTCCTAAAGTGCTGGGATTACAGGTGTGAGTCACCAAGGCCCAT

FIGURE 3CCCC



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64104 TGGCACCTTCATAGCAATCATATTCTTGTGAGTTAGTTTTAATAATGACTTGACTCTTAA  
ATAAATAGAAATACAAATTCTTCCCTTCTGGGAGTAAATATGATTTTCATAGCTATGCC  
TATAATTCTTCTCAAAAAAATAAAATGTTAAAAATCCAAGGGCAGCATTTTCATATAAGTG  
TTTCATAGGAAGTCAGTTCTCCAAATGGCTTTGTCTTTTTTTTTTTCTTTTTCTTTTT  
GAGACAGGGTCTCATTCTGTCACTTAGGCTGGAGTGCAGTGGTGTGATCATGGCTCATTG  
[C, A, G, T]  
AGGTTCAACTTCTGATCGAGGTATCAGCTGATCCTTCTGCCTCAGTCTCCTGAGTAGCT  
GGGACTACAGGCATGTGCCACCATGCCTGGCTACTTTTTGCATTTTTTTGTAGAGACAGG  
TTTTACCATGTTGCCAGGCTGGTCTTGAATTCCTAGGCTCAAGCAATCAACCCGCCTT  
GGCCTCCTAAAGTGCTGGGATTACAGGTGTGAGTACCACGCCCATCCCTTTCTCTTT  
CATGGGAAATGCTACCACATTTGTGGTGTGAGATTTTTGTACTAATCAGTGCCAGATT

64166 AAATAGAAATACAAATTCTTCCCTTCTGGGAGTAAATATGATTTTCATAGCTATGCCCTA  
TAATTCTTCTCAAAAAAATAAAATGTTAAAAATCCAAGGGCAGCATTTTCATATAAGTGTT  
TCATAGGAAGTCAGTTCTCCAAATGGCTTTGTCTTTTTTTTTTTCTTTTTCTTTTTTGA  
GACAGGGTCTCATTCTGTCACTTAGGCTGGAGTGCAGTGGTGTGATCATGGCTCATTGCA  
GGTTCAACTTCTGATCGAGGTATCAGCTGATCCTTCTGCCTCAGTCTCCTGAGTAGCTG  
[G, T]  
GACTACAGGCATGTGCCACCATGCCTGGCTACTTTTTGCATTTTTTTGTAGAGACAGGTT  
TTCACCATGTTGCCAGGCTGGTCTTGAATTCCTAGGCTCAAGCAATCAACCCGCCTTGG  
CTCCTAAAGTGCTGGGATTACAGGTGTGAGTACCACGCCCATCCCTTTCTCTTTCA  
TGGGAAATGCTACCACATTTGTGGTGTGAGATTTTTGTACTAATCAGTGCCAGATTAA  
AAGCTAGCATGCTATAGAGAATGGAATAACAATTCTGGAGTAGTTTTAAGTAGGAGTA

64408 TTCAACTTCTGATCGAGGTATCAGCTGATCCTTCTGCCTCAGTCTCCTGAGTAGCTGGG  
ACTACAGGCATGTGCCACCATGCCTGGCTACTTTTTGCATTTTTTTGTAGAGACAGGTTT  
TCACCATGTTGCCAGGCTGGTCTTGAATTCCTAGGCTCAAGCAATCAACCCGCCTTGGC  
CTCCTAAAGTGCTGGGATTACAGGTGTGAGTACCACGCCCATCCCTTTCTCTTTCA  
GGGAAATGCTACCACATTTGTGGTGTGAGATTTTTGTACTAATCAGTGCCAGATTAA  
[A, G]  
GCCTAGCATGCTATAGAGAATGGAATAACAATTCTGGAGTAGTTTTAAGTAGGAGTATA  
ATTACATTTATACACATTGTTGTGATATGAGGTAGGATCCTTTTTAATTAGTTGTAAGAC  
ACGTCATAATAACCTGATAGGCGTTCTGAAGTGAATCTAGTATTGTGTTGAATTTCTCT  
TCATTAGGCAGTAAGATCTTGAAGAAAAGGAATGCACTGTGTTACCTTTCTCCTCCATG  
TGACCTATGCTTTGCTTTGCCTCTAATTATTGCCCATTAGATAAATGTTTTTAGAGCAAG

64786 TGTTGTGATATGAGGTAGGATCCTTTTTAATTAGTTGTAAGACACGTCATAATAACCTGA  
TAGGCGTTCTGAAGTGAATCTAGTATTGTGTTTGAATTTTCTTCATTAGGCAGTAAGAT  
CTTGAAGAAAAGGAATGCACTGTGTTACCTTTCTCCTCCATGTGACCTATGCTTTGCTT  
TGCTCTAATTATTGCCATTAGATAAATGTTTTAGAGCAAGATATCAAAGCAAATGT  
AGAACACTGGTGTATGCACAAGCTATCTGAGCTTATCCATGCATTTGTTGATTAATTGCG  
[C, T]  
ATTTCCGTATTGCCCATTTCTTTAACCCCTCATCTTTATGAGAGAGCTCAGAGACCTGAATG  
AAGGACAGGGTCAGAGAGCGTGGAGGTCCTTATTCTGATGCTGCCATTAAGACTGGTGTC  
CTGTTTTGACCTCAAAGATTTCTCTGTGAAATGAGATATGTGTGTGTATGTGTGCGTTG  
TGTGAATGTGTTTGACATACACAGTGTGTGCATTTAAGATAATTTTATAACAATTTAA  
AAAGCTGCTCTTTATTAGGCATCTGTTATGAGCTGGGCATCATATACCCATTATCTCATT

65120 TTATGAGAGAGCTCAGAGACCTGAATGAAGACAGGGTCAGAGAGCGTGGAGGTCCTTAT  
TCTGATGCTGCCATTAAAGACTGGTGTCTGTTTTGACCTCAAAGATTTCTCTGTGAAATG  
AGATATGTGTGTGTATGTGTGCGTTGTGTGAATGTGTTGCACATACACAGTGTGTGC  
ATTTAAGATAATTTTATAACAATTTAAAAAGCTGCTCTTTATTAGGCATCTGTTATGAGC  
TGGGCATCATATACCCATTATCTCATTAAATCTTATCAACAACACTCTAAGTTTCATATCA  
[A, G, C]  
GATTCCTCATTTTACAGGGGAGGAAACATCAGTTTCTTAAAGAGGTGAGTAACTTTCCAA  
CCACCAAAGTGGTAGAGCTGGTAGTCAGCGCAAGGTTGGACTGACTGTACACTCTCTCAT  
CCAAATAGTCTACAGGCCCTTTAAGTAGATCTTGGTTTATAATAAGCTCCAGTCTCTTTT  
AAACTGTGCTTTTATGTTGAATGCTGTATTAGTCCATTCTCACTATAAAGAACTATCTGA  
GACTAAGCAATTTATAAAGAAAAGAGGTTTAAATTGATTACAGTTCCGCAGGCTGTGCAG

FIGURE 3DDDD



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65703 GTTCCGCAGGCTGTGCAGGAAGCATGGCTTGGGAGGCTTCAGGAACTTACAATCATGGC  
AGAAGACGAAGGGGAGGCAGGCATGTCTATATGGCTGGAGCAGGAGGAAGAGAGAGCAA  
AGGGAGGGATGCTACACACTTTTAAACAACCATATCTTGGCCTGGCGCGGTGGCTTACAC  
CTGTAATCCCAGCACTTTGGGAGGCCAAGGTGGGTGGATGACCTGAGATCAGGAGTTCGA  
GACCAACCTGGCCAACATGGTGAAACCCCATCTCTACCTAAATACAAAATTAGCCAGG  
[C, T]  
GTGGTGGTGTGCACCTGTGGTCCCAGCTACTAGGGAGGCTGAGGCAGAAGAATTGCTTGA  
ACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCATGCCACTGCACTCCAGCCTAGGCAT  
CAGAGCATGACTCTCTCAAAACAAAAACAAAAACAAAAAGCCAAACAAACAGATTTCATG  
AGAACTCACTCACTATCACAAGAACAGCAAGAGGGAAATCTGCCCCACCATACCCCCTTC  
TCCTACACTGGGGATTACAATTCAACATGAGATTTGGGCAGGGACATAAATCCAAACCAT

66930 ATGCCTCTGAGCAGCACTGTATGTAGCGATCACAAGAAACACAGTATTTAAAAATAGTCT  
GTCTTTCACATCTGGAAGGGTTTTTCAGTGTGCTGTGTTTTAAGTTGGAAAGATAGTACTAT  
TGTATCTCACCCAAGTCTGAAAGGAGTGACTGGAGAGTAGAAAGTAGATGGAAAGTATTT  
ATTTTCATCATGTCTCTTGGCTGGATTGAGTGAACCCCTCATAAAGCCAAGCTGGAATGTG  
TGCTTCATATTATTAATAACCAAAATAGAGTATCCAGAGAAGCATGATACCCTCAAATG  
[C, G]  
CTGGATAGCCTAGAAGAGCCTTAGCTCTTACAGCCATCGTGGGGAGGGATTTTCCAACAA  
GTAAGACCATTTCATGGGGTACTGTGGGACTCCAGAGGAGAGTAATGGGCCACTATCCCT  
AAAGGTGAAGAAAGATGGGTTGCTGTTATGAAGGGGACATTCTCATCCATTCATTAGTCT  
ATTCATTTCATCTATCCATCCATCCACTTGTCTCAGAATTGCTGCTGAACTCCTGCATGT  
ATCAGGTAACATGCCAGGTGTGGGGAGAGAAAGAAGAAGACACGGCCGGGTTTCGGTGGC

66951 TGTAGCGATCACAAGAAACACAGTATTTAAAAATAGTCTGTTTTTCACATCTGGAAGGGTT  
TTCACTGTGCTGTGTTTTAAGTTGGAAAGATAGTACTATTGTATCTCACCAAGTCTGAA  
AGGAGTGACTGGAGAGTAGAAAGTAGATGGAAGTATTTATTTTCATCATGTCTCTTGGCT  
GGATTGAGTGAACCCCTCATAAAGCCAAGCTGGAATGTGTGCTTCATATTATTAATAACC  
AAAATAGAGTATCCAGAGAAGCATGATACCCTCAAATGCCTGGATAGCCTAGAAGAGCC  
[T, G]  
TAGCTCTTACAGCCATCGTGGGGAGGGATTTTCCAACAAGTAAGACCATTTCATGGGGTA  
CTGTGGGACTCCAGAGGAGAGTAATGGGCCACTATCCCTAAAGGTGAAGAAAGATGGGTT  
GCTGTTATGAAGGGGACATTCTCATCCATTCATTAGTCACTTCATTTCATCTATCCATCCA  
TCCACTTGTCTCAGAATTGCTGCTGAACTCCTGCATGTATCAGGTAACATGCCAGGTGT  
TGGGGAGAGAAAGAAGAAGACACGGCCGGGTTTCGGTGGCTCACGCCTGTAATCCCACCAC

68094 GAGACATTTTTGGTTGTTACAGCTGGGGAGGTGCTATAGACATCTAGTGGGTAGAGGCCA  
GGGTTGCTGCTAGACATCCTACAATGCACAGCATAGACCCCCCTCCACAAAGAATTAT  
CCAGTTCAACATGCTCATAGGTTGAGAAGCACTGGAGGAAGAGGCATGTAAGCCAATAAT  
TACAATCTTTTGGAAATAGAGCTATCTGAAAGACGTCCAAAAATGGAGCCCTAGTGAGGC  
AAATAGAGCTCAGAGAATATTTTGTTGTTATTTATCTCCTTCAGTCCCCACAGCTGTTCT  
[G, A]  
TGAGGATAATCTTTGGTGCCACATACAGACGAGGAAATGAGGCAGCAGGAGCTGAAATG  
ATGGCTTAAGTTACCTGGTTAGAAATGGAGGATCCAGGGTTTACTGCCAGGCAGTCTGA  
CCACATATCCCAGGCTCTGAACCACCATGCACTGGAACAGAAACACGATATCTGGGAGGG  
ATTCATTGGGTAGGCCATGGTTGGAGGGTATCCCAATGGCTGGCATGTGGCCCATGGGAA  
AATGCTAACAAGTTTGTGGTGACAAGAATGTTATACTAATCAGTTCCAGATTTGAGGCAT

68124 GTGCTATAGACATCTAGTGGGTAGAGGCCAGGGTTGCTGCTAGACATCCTACAATGCACA  
GCATAGACCCCCCTCCACAAAGAATTATCCAGTTCAACATGCTCATAGGTTGAGAAGC  
ACTGGAGGAAGAGGCATGTAAGCCAATAATTACAATCTTTTGGAAATAGAGCTATCTGAAA  
GACGTCCAAAAATGGAGCCCTAGTGAGGCAAAATAGAGCTCAGAGAATATTTTGTGGTTA  
TTTATCTCCTTCAGTCCCCACAGCTGTTCTGTGAGGATAATCTTTGGTGCCACATACAG  
[A, G]  
CGAGGAAATGAGGCAGCAGGAGCTGAAATGATGGCTTAAGTTACCTGGTTAGAAATGGA  
GGATCCAGGGTTTACTGCCAGGCAGTCTGACCACATATCCCAGGCTCTGAACCACCATGC  
ACTGGAACAGAAACACGATATCTGGGAGGGATTTCATTGGGTAGGCCATGGTTGGAGGGTA  
TCCCAATGGCTGGCATGTGGCCCATGGGAAAATGCTAACAAGTTTGTGGTGACAAGAATG  
TTATACTAATCAGTTCCAGATTTGAGGCATTGAAAGTGATCAGAATGGCTTGAAGTGA

FIGURE 3EEEE



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

68787 CTTAGAGGACCTTTATGTTGTGGAATGTCGAGTCACTGAAAGCTTTAAGCGAGGCTTGA  
AGATGGAATTTGGCTGCTGAAAAACCTTTTAGCAATGAGGAAGTTGGGTTGGAGGAAGG  
AGAAACGGGAAGAAGGAAGACCAGTTAGAATGTTGCAACATCACAGGTGAGGGATGCTGA  
GAGATAGAGAAAAGGCTATATTTAAGAAAGTTGACAGAGAAAACCTGAAAATTACTCAA  
CCTGACTCAGCAAAGATTTCTGCTATGTGCTGCATATCCCTGCATGGCCTGTAGCCCCA  
[A, G]  
GACTCGGGGGTTAATCTCCCCACGTTAAATCCTATACCACTTAATGAGCTGAGTGAATTG  
GGCAAATATCATGTTGCCCCGGCCTCACTGCTCTTCTGTGAAATGGAGATTGCGATCACG  
GTGTCTACCTGTTAGACACTATGGTGGTCTGAGGATTAAACAAAAGAAGCTCAGTAACTT  
TGAGCTCTTGTTATTGCTGCTGCTTATTTGTTAGGGAAGGAAGAAAAAAGAAACCAGAA  
AACTCCTAACTGATGCGCATCGTGGAGTTCTGCTGAGGGAAGAGAAGAAGGTGTCTGA

69668 CACTGATCTCTCTCCCCGCTGCTTCTCTGGTTTGAGGCACAGTTTCAGAGAACCTGAGGG  
ACCCGGTGGGCTCAGGCGGCCTCAAAGCAGCAGGTACCTGACCAGTGGAGTGACCACAG  
ATTTCAAAGGTGTGACCGAGTGAAAGGGCTTATATCCCAATGCCTGACTGCAGTTAAACC  
CTAATGAGGTATGTGGATCTTCTAGAGGAAGGGCCAGGCCCTTTAATAAGGACCCTTCT  
GAACAAAGAGACAAGATGCTAATCCGAATTCCTAGGACCAAGTTTGATGTCCTAGGGC  
[C, A]  
AGCCGCTTAACCCGAGCTGGGGCTCAGCAGTTAAGCACATAGAGGACACAAAAGATGCAT  
CCGTCTCTAGAATCTTACCCCTGAGATGTGAGGGAGTGTGCAGACGATTGTAAATGGGTA  
ACTTCTCTCAGAGCTGGTGTAATAATAAAATATAGCTACCACTTACTGATTGTTTACTTT  
CCTCTAGACTCTGTTCTAAGTGCTTGAATCCTCTAGCTCATTTAACTCTTGCAAGAAGCC  
TACAAAGTAGGTACTTTTTTTTATTCTTTTTTTTAAACAGGGTCTTGCTCTCTTACCC

69701 GAGGCACAGTTTCAGAGAACCTGAGGGACCCGGTGGGCTCAGGCGGCCTCAAAGCAGCAG  
GTCACCTGACCAGTGGAGTGACCACAGATTCCAAGGTGTGACCGAGTGAAAGGGCTTATA  
TCCCAATGCCTGACTGCAGTTAAACCCTAATGAGGTATGTGGATCTTCTAGAGGAAGGG  
CCAGGCCCTTTAATAAGGACCCTTCTGAACAAAGAGACAAGATGCTAATCCGAATTCCTA  
CTAGGACCAAGTTTGATGTCCTAGGGCCAGCCGCTTAACCCGAGCTGGGGCTCAGCAGTT  
[A, C]  
AGCACATAGAGGACACAAAAGATGCATCCGTCTCTAGAATCTTACCCCTGAGATGTGAGG  
GAGTGTGCAGACGATTGTAAATGGGTAACTTCCTGCAGAGCTGGTGTAATAATAAAATAT  
AGCTACCACTTACTGATTGTTTACTTTCTCTAGACTCTGTTCTAAGTGCTTGAATCCTC  
TAGCTCATTTAACTCTTGCAAGAAGCCTACAAAGTAGGTACTTTTTTTTATTCTTTTTT  
TTAAACAGGGTCTTGCTCTCTTACCACACTGGAGTGCAAGTGGTGCAATCATGGTTCAC

69773 GTGGAGTGACCACAGATTCCAAGGTGTGACCGAGTGAAAGGGCTTATATCCCAATGCCT  
GACTGCAGTTAAACCCTAATGAGGTATGTGGATCTTCTAGAGGAAGGGCCAGGCCCTTT  
AATAAGGACCCTTCTGAACAAAGAGACAAGATGCTAATCCGAATTCCTAGGACCAAGT  
TTGATGTCCTAGGGCCAGCCGCTTAACCCGAGCTGGGGCTCAGCAGTTAAGCACATAGAG  
GACACAAAAGATGCATCCGTCTCTAGAATCTTACCCCTGAGATGTGAGGGAGTGTGCAGA  
[C, T]  
GATTGTAAATGGGTAACCTTCTGCAGAGCTGGTGTAATAATAAAATATAGCTACCACTTA  
CTGATTGTTTACTTTCTCTAGACTCTGTTCTAAGTGCTTGAATCCTCTAGCTCATTTAA  
CTCTTGCAAGAAGCCTACAAAGTAGGTACTTTTTTTTATTCTTTTTTTTAAACAGGGT  
CTTGCTCTCTTACCCACACTGGAGTGCAAGTGGTGCAATCATGGTTCAGTGTAGCCTGGAA  
CTCCTAGGCTCAAGCAATCCTCTGCCTCAGCCTCCTCAGAACGTTTCTGGGGTAGGTT

70257 GCTCTCTTACCCACACTGGAGTGCAAGTGGTGAATCATGGTTCAGTGTAGCCTGGAACCTC  
CTAGGCTCAAGCAATCCTCTGCCTCAGCCTCCTCAGAACGTTTCTGGGGTAGGTTGGT  
CCATCCCCTCAGAGTGAGCAGGTTATCTCACTCCCTGGAAGGCTGGCTTCTCCCCTGCC  
TCTCTTCGGTGCTTGCCCTCCAGCAAGTTACTGAAGTCCCTCAGAGGCCTCTCCACCGTGA  
ATGGACACTGTCTGTCTGTGGGACTACAGGTGGATACCACCAGACCCAGCTAATTTTAA  
[-, T]  
TTTTTTTTTTTTTTTGGTAGAGACAGGGTCTCACTGTGTTGCTCGTCTGGTCTGAACT  
CCTGGCCTCAAGCAATCCTCCCACCTCAGCCTCCCAAAGTGCTGATATTACAGGTTTGAG  
GCACCATGCCCAGTCTGAAGTAGGTTCAATCATCATCTCATTTTATGGATGAGGAAATAA  
ATCCCAAGAAGTTAAATAACTTGTCCAAGTCCAGACAGCCAATAAGTGATTAACTTGGA  
TTTGAGCCCTGGGAAGCCAGACTCCAGAGCCACACAACCTGAACCTTGTGCCATACTGC

FIGURE 3FFFF



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70261 TCTTACCCACACTGGAGTGCAGTGGTGCAATCATGGTTCAGTGTAGCCTGGAACCTCCTAG  
GCTCAAGCAATCCTCCTGCCTCAGCCTCCTCAGAACGTTTCTGGGGGTAGGTTGGTCCAA  
TCCCCTCAGAGTGAGCAGGTTATCTCACTCCCTGGAAGGCTGGCTTCTCCCCTGCCTCTC  
TTCGGTGCTTGCCTCCAGCAAGTTACTGAAGTCCTCAGAGGCCTCTCCACCGTGAAATGG  
ACACTGTCTGTCTGTGGGACTACAGGTGGATACCACCAGACCCAGCTAATTTTTTAATTTT  
[-, T]  
TTTTTTTTTTTGGTAGAGACAGGGTCTCACTGTGTGTGCTCGTGCTGGTCTGAAACTCCTG  
GCCTCAAGCAATCCTCCACCTCAGCCTCCCAAAGTGCTGATATTACAGGTTTGAGGCAC  
CATGCCCAGTCTGAAGTAGGTTCAATCATCATCTCATTTTATGGATGAGGAAATAAATCC  
CAAGAAGTTAAATAACTTGTCCAAGTCCAGACAGCCAATAAGTGATTAAACTTGGATTGT  
AGCCCTGGGAAGCCAGACTCCAGAGCCCACACAACCTGAACCCTTGTGCCATACTGCTTAC

70268 CACACTGGAGTGCAGTGGTGCAATCATGGTTCAGTGTAGCCTGGAACCTCCTAGGCTCAAG  
CAATCCTCCTGCCTCAGCCTCCTCAGAACGTTTCTGGGGGTAGGTTGGTCCAAATCCCCTC  
AGAGTGAGCAGGTTATCTCACTCCCTGGAAGGCTGGCTTCTCCCCTGCCTCTCTTCGGTG  
CTTGCTCCAGCAAGTTACTGAAGTCCTCAGAGGCCTCTCCACCGTGAAATGGACACTGT  
CTGTCTGTGGGACTACAGGTGGATACCACCAGACCCAGCTAATTTTTTAATTTTTTTTTTT  
[-, T]  
TTTTGGTAGAGACAGGGTCTCACTGTGTGTGCTCGTGCTGGTCTGAAACTCCTGGCCTCAA  
GCAATCCTCCCACCTCAGCCTCCCAAAGTGCTGATATTACAGGTTTGAGGCACCATGCCC  
AGTCTGAAGTAGGTTCAATCATCATCTCATTTTATGGATGAGGAAATAAATCCCAAGAAG  
TTAAATAACTTGTCCAAGTCCAGACAGCCAATAAGTGATTAAACTTGGATTTGAGCCCTG  
GGAAGCCAGACTCCAGAGCCCACACAACCTGAACCCTTGTGCCATACTGCTTACTTGCATC

70941 AGAAGGAAACATGATTCAAGAACTGGGCTGTCTGGCATGGTGCTATAGCACTCCACGTG  
GGGAATATTGTGTTTTCAAAGAAAGGGTGTGTTAGAAGGGGAATGATCATGGACGTTATA  
TCAGATAGACTTGGTCCCTCAACACCACTAAACCTAAGGCCCTCCTCATATTAAAGGGA  
TCACAGTCCTCATTAGGATGATTGTGGGGAGTGAGTGAACCTAGCAGAGTGCCCTGGCATG  
TCACTGGCATCAGGAAATGCTATTTCCCTTCTCCACCCGCTTTCTTCTCTCAAGCGAAC  
[G, A, T]  
GAGTAGACAAAGATAATTATACCTGGAGTACTTGCAATTTCTTTGGCAGTAGAATAAAGTA  
AATTAAATGTATTTTTGAAGTTGAGGTTTCCATGAACCTTGATTGGCGGTCACTGTGTCC  
CAAGAAAGCCTTTATCTTTGACGTCCTCACATGCCGCAATTGCTTATCTCCCTGTTCCCA  
GTGCAATTGTCTTAGAAGCTTCTATACTGACTAGTCTTGAGAAAGCCATAAAACATTCC  
TCTTTGTGATCCTCAAAGAATAAAATCGTGAGGAGCCTTCGCTGACTGACGGGGAAGTG

71359 TCCCAAGAAAGCCTTTATCTTTGACGTCCTCACATGCCGCAATTGCTTATCTCCCTGTTCT  
CCAGTGCAATTGTCTTAGAAGCTTCTATACTGACTAGTCTTGAGAAAGCCATAAAACAT  
TCCTCTTTTGTGATCCTCAAAGAATAAAATCGTGAGGAGCCTTCGCTGACTGACGGGGAA  
GTGTAGAATGAATGCTTCGGTTTGAGGGATGATCATTGGCAGCAGTCTTTTTTCAGGTT  
ATGAATTCTGATGTTTCCAGATGTTTGAAGATTTGAGTGTCTTCAGGGGAGCTCGAGT  
[G, T]  
GTCCCATGGCTGCCATTTCTTCTGGTCATAGCCTCGCTGAAGGGAATAGCATTTCACGGG  
AGTGGGTTTAGGTTGGATGAGGCACCCATCGGGAAGGACATGGGATTTTTTCATTCTAAG  
TGCTTGCCATAAAGCAAACGACAGGGGTCTATTCCTCTCTCTGAGAAATGTTTCTGG  
GGCAGGTTGGTCTAATCCCCTCAGAGTGAGCAGGTTATCTCACTCCCTGGTAGGCTGCC  
TTCTTCCTTGGCTCACTTCACTCCTTGCCCTCAGCAAGAGGGTCTCTCCAATGCAAAAT

72550 TGAGTATTATTTGGCAAGATTTATTATTTTTTTCATTAAAAAATAAAAATGACCTATAAT  
AATTGTATGTATTTATGAGGTACCTCGTGATGTTCCATACCTACAATGTATGATGATCA  
GATCCGGGAAATTAGCATATTCATCATCTCAAACATTTATCATTCTTTGTGTTGGGAAC  
GTTCAATATCCTCCTTTTAGCTATTTGAAACTATATACTAGATTATTGTTAACTGTAGTC  
CATCCTGCAGTGGTATAGAACACTAGAATTTATTCCTGTTATCTTGCTGTAATTATGTCC  
[C, T]  
GTTTAAACAATCCTTCCCTATCCTCTGCTCCCCTGACTCTTTCCAGTCAGCATTATTTAT  
TAGGCACTGATTCTGTGCTGGCTGGGTGCTAGAGAGTTTACATATATTACTTAGCTTCAT  
TTGCCTCTCTCCATTGCACCAAGAGGCGGCCACTGTTGCTGCCCCATTTTACAGAGGGTA  
AAGTTCTTGATCTAGCTAGTGACCAAAGCAGGACTTGAGTCTAGCTAGATCTCTCTGAC  
TCCAGAGGCCACGCTCTCTTAATCGTACTCTCCTTGGCTTGACACGGTGGGCTTAGAGAG

FIGURE 3GGGG



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75313 AGCCTCCTGAGAAGCTGGGACTACAGGGGTGTGCCACCACACCCAGCTAAGACAAAAACT  
CACCTTGTTGTCTTCTTTATGCATGAGCAGATTCCCTTGGTATCTATAGCCGTCGAAGCT  
TTACGTATTTCCCTATTTAGGGACATAAGAATTTTATAGGAAAGCAGCGTGTGGAAAGCA  
CGGCACCTGAGATGTTTCATGGAATCCTTGTGTGACTTCAGAGTGCAGATCTAGAGCAG  
CCCTCTGTTTGTCTGCCCTGGGCCATCCCCTATTTCAAGCAGTCTTTAGTCCAGGAAGTT  
[T, A]  
AGGTAGCAGCTCAGGCAGCAGGTGAGCTCTGGAGAGTGCAGGTTCCGGTTCTTTGAGCCC  
AGGGGCACAACCTCTGAGTTGAAGTGACTCCTCCTGGCTGTTGCTTTGAATTTAGAAGAGC  
TGCCCTTTACCAGCAAGGCAGTCACGCAAAAGATGCTTCAATGTGTGCAAGATCAGGCC  
TGCAGCCCCCAGCCTGTGTCTACAGGCCTCCGAGTCATTATTATTACGGTTTCTATCCCT  
GGGTTATTGATTTCACTACTGTTTAGTGAAGGAGATCTAAAGCTTTTAAGCCAGAAATT

75541 GATCTAGAGCAGCCCTCTGTTTGTCTGCCCTGGGCCATCCCCTATTTCAAGCAGTCTTTA  
GTCCAGGAAGTTTAGGTAGCAGCTCAGGCAGCAGGTGAGCTCTGGAGAGTGCAGGTTCCG  
GTTCTTTGAGCCCAAGGGGCACAACCTCTGAGTTGAAGTGACTCCTCCTGGCTGTTGCTTTG  
AATTTAGAAGAGCTGCCCTTTACCAGCAAGGCAGTCACGCAAAAGATGCTTCAATGTGT  
GCAAGATCAGGCCTGCAGCCCCCAGCCTGTGTCTACAGGCCTCCGAGTCATTATTATTAC  
[G, T]  
GTTTCTATCCCTGGGTTATTGATTTCACTACTGTTTAGTGAAGGAGATCTAAAGCTTTT  
AAGCCAGAAATTAAGAGGTAATGGAATTTGGCATGCCACTGGAAAATGAATTTGCAAAAT  
GAGAATTTCAATGTTCTAAAAAACTCCCATAAAAATAAAACCAAAACCCAGAGTGAATG  
CTCCTGTGACTGCATTTTTTTCCAAATGTGCATGGGTTTGTCTCCTTTAGAGTGTGGCT  
GTATACATTATGGAATAATGAGATTTTGATGGTGTCTCGTTCTACAATTGCTCTTATTA

75957 CAAATGAGAATTCAATGTTCTAAAAAACTCCCATAAAAATAAAACCAAAACCCAGAAAT  
GAATGCTCCTGTGACTGCATTTTTTTCCAAATGTGCATGGGTTTGTCTCCTTTAGAGTG  
TGGCTGTATACATTATGGAATAATGAGATTTTGATGGTGTCTCGTTCTACAATTGCTCT  
TATTACTTATCACAATAACAATGTATTCAATTTATATACTAATATTACTTAGTACCTATA  
ATGAAGCAGGTGCTATGTTTGGCTCTAGCGATTAAAAACAATAAAAAATGCAAGATGCC  
[T, G]  
CCACCTGTCTCAGGGAGCTTGAGGTTTCAGTATTAATTATATCGCTAGCCAATTCTGGC  
ATGGTGCTTACTGTGACAGGAACCTCTCTAAATGCTTCACGTGTAGTAACCTCATTTAA  
TTTTACATTGATCCTATGAAGTGGGGTAAGCAACAGAGGAACAGAGAAGTTAAATAACTT  
GCCCCAAGCTGAAGTGAGAGGTGGAACCTGTGATCCGGCCAAGGCAGTCCGGCTCTAGAATC  
CATGGTTTTTAGCCATGATGCTCTACTCTAGTGGATAGTTACAGCCAGTAGCTATTGGT

76415 GGAACAGAGAAGTTAAATAACTTGCCCAAGCTGAAGTGAGAGGTGGAACCTGTGATCCGGC  
CAAGGCAGTCCGGCTCTAGAATCCATGGTTTTTTAGCCATGATGCTCTACTCTAGTGGATA  
GTTACAGCCCAGTAGCTATTGGTTACTAGATTGGTTCTAGAAGACAAGGAAGCACTCAGG  
TCCTTAGTCACAGAGCAGGAGTCTCTGACTCAACCTATGGGACCCCCAAGAGGACCTTCA  
TTACCTGTGAGTCAACTGCAGAGAGTCGTGATTACCTCCTGGTTGTCTTTAGAGTGGC  
[A, C]  
GGGCTTTGTGTCTTAACATAAGGTGTTGAAGCTGGGTCAACCTTTTCGATCTAAAACCAA  
TGTCCATGGGTTATCATTTCAGGTCTGCAATTAAGAGTAGCTTGTCACTTTATATTGGGAA  
CATTTATTTTTCTCTCTATGAAAATGGGCAGAAGAGATGAAAAGCCTGCTGGTG  
CAGCTTAACTTTCTCAGTAAGTGAGTGTTTAACCTTTTGTTTTTTTAAAAATGGAGATG  
AGACATACAAATTATGACTTCTCTATGTTGTCTTTTTTTTAGTTGGAAGAAGGTGACAT

77872 TCTTGTAGCTGCTTTTGTAGTCCAGTACAGTTTTTTAAAAATAGAAATTGGATAGACCCA  
TTTTTAATGGGAATGATCTCAAGTGACAGAGAGCAAGGCATATATCAGACACTCTCCTC  
AGGACCAGGGCAATTTTCAACATCAGTTGGCAAAATTGTTATTCTGCCTGTAGAGTGTA  
AGTCCAAACTGAGATGAAAGAGTGACAGCTTGTTAGTCTGAAAGTTTATTGATCATATCA  
AAGTATACACATCTATCCCTGATTCCCTAGTGGACTTGATACTTTCTCCTGCTGGTTAAAA  
[T, A]  
TTGTCTTATTTTCATCCTTCCATGTAGTCAAAGAGAGACAGAGGAAATGCATTTTCCATCA  
TAAGGCACAATTTGGAAGCTACAAGAGTGCCCCCAATATGGCCTGGTCTCATAAGATAA  
TATTTAGATAGATTAGTCGTTAGTGAATACCAAGGGGCTAATGAATTGAGTCTCAGAAA  
TCCCCATTGTAAGGGATTAACTTGTAGTAGCAAGGAAAGCTAGCGTGTCTAAGACCATAC  
GCCATGAGCAAGCATGCTAGCCCATCCTGGGTTTCTCTCTCTCTCTCCAAACAGATTCT

FIGURE 3HHHH







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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

83756 CATATGTGGCCACCAGGGCTAAAATATTTACTATCTGACCCTTTATGGAAAAAGTTGTT  
GATCCCTGGTTTCAGAGTGTGTTTGAATAAACTCAGATGAAAGAAGGCAAAATGTAATGATGA  
TTGACTTTTCCAGTTGTAATCTGATTGTGACAACCACTGTATGCCTGTTTAAACAAAGC  
TTAATGGGCATTACTTAGGATAAATGTAATTACGTTTCAATATTTGTGTCTTGCTCTCCC  
TACATAGGGTTATTCCAGGTTTGCCCAAGGAACAGAGAGTCTGTTTGTGTTCTAGAAGT  
[C, T, A]  
GCTCCTGTGTCTGTACCTCCTCTCCAAGGCTTCCACCTGTGCTTTTATCCCAAGTTC  
ACCCGTGTGAACAGCATGTGTTTCGGCTGCCATGACAGCACGTCTACCTTTTCCCTGG  
CTTGAAAGAAGATGGCAGGGGCCAGCTCAGGAAGAACTGCTACGGAGTTTTCACCTTC  
TCCTGCTCGTGATGAGGCTAGGGAGGGATTTTAGCGTATCTTAAATTGTTGCCGAAGTA  
TGAAGTCCGGGAAGGGGCAACTGTGAAGCAGTGATGCATAGACTAAGTCTCCTGGAAGA

84687 GGGTGTACTTGGACCATCTCATTTAATCCTCACAACAACCCTGTGGGGAAGGTATTATC  
TCTAGTTTGCAAATGAGGAACTAGGCTCAGAGAGGTTCAAACAACCTTGCCCAAGGTTCT  
GAAGTTAATAACGGCCACAGCCAGGATGGCTCTTAACCTCCTGCCCTGTGGAAACAAGCTC  
AACGTAAAAACATTCTTACAAGACAGAAAAGAGTGAAAAAGCAACCAAAATCCTGCCTTG  
GGAAATGCCCACTTTGGGTGAACATTCTTCTAGACATTTTTTGTGTGTGTATATGCACAG  
[A, C]  
AACTTGTAACATTTTGCATAATCTGGGCCACCCCATGCCTGCAAGCTTTCTATAAATGTC  
ACCATATTTCTATATCCTAGCGTTTCCCCCTATTTAACTAATTTTCTGATTTTCACAA  
CTGGGTGCATGATTTTGTCTTTGGGATGCTACCATCATCCACTTAACCACTTCTCTA  
GATCACTGCAGGTTCTTGAGTAGGGGAATAATGTATTGGAACCTTTTTTTTTTGAAGAA  
AAAAAAATAAACAACCTTTAACTGAGTCTTATGCTTTTTCCCTTTCTTTGCAGCATGC

84761 GAGGAACTAGGCTCAGAGAGGTTCAAACAACCTTGCCCAAGGTTCTGAAGTTAATAACGG  
CCACAGCCAGGATGGCTCTTAACCTCCTGCCCTGTGGAAACAAGCTCAACGTAAACATTC  
TTACAAGACAGAAAAGAGTGAAAAAGCAACCAAAATCCTGCCTTGCGGAAATGCCCACTT  
TGGGTGAACATTCTTCTAGACATTTTGTGTGTGTATATGCACAGAACTTGTAACATT  
TTGCATAATCTGGGCCACCCCATGCCTGCAAGCTTTCTATAAATGTCACCATATTTCTATA  
[C, T]  
CCTAGCGTTTCCCCCTATTTAACTAATTTTCTGATTTTCACAACTGGGTGCATAGTA  
TTTTGCTTTGGGATGCTACCATCATCCACTTAACCACTTCTCTCTAGATCACTGCAGGTT  
CTTGAGTAGGGGAATAATGTATTGGAACCTTTTTTTTTTGAAGAAAAAAAATAAACA  
ACTTTTAACTGAGTCTTATGCTTTTTCCCTTTCTTGCAGCATGCTCTTGATGCTGACA  
ATGCGGGAGTCAGTCCAATAGGAACTCTTCCAACAACAGCAGCCACTGGGACCTCGGCA

84911 CAAAATCCTGCCTTGCGGAAATGCCCACTTTGGGTGAACATTCTTCTAGACATTTTTGT  
GTGTGTATATGCACAGAACTTGTAACATTTTGCATAATCTGGGCCACCCCATGCCTGCA  
AGCTTTCTATAAATGTCACCATATTTCTATATCCTAGCGTTTCCCCCTATTTAACTAA  
TTTTCTGATTTTCACAACTGGGTGCATAGTATTTGCTTTGGGATGCTACCATCATCCAC  
TTAACCACTTCTCTCTAGATCACTGCAGGTTCTTGAGTAGGGGAATAATGTATTGGAACC  
[-, T]  
TTTTTTTTTTGAAGAAAAAAAATAAACAACCTTTTAACTGAGTCTTATGCTTTTTTCCC  
TTTCTTTGCAGCATGCTCTTGATGCTGACAATGCGGGAGTCAGTCCAATAGGAACTCTT  
CCAACAACAGCAGCCACTGGGACCTCGGCAGTGCCTTTTTCTTTGCTGGAAGTGTCAATTA  
CGACCATAGGTACCCGTTTGTGTTGCTAATATCTCTCCTCTGCAGGTCACTTGAGTAAG  
GGCGCTTAGTCAGTGTTTTGTCTCATAGCATACACTATAGTTTGAGGTTTCAAGGAGGC

84921 CCTTGCGGAAATGCCCACTTTGGGTGAACATTCTTCTAGACATTTTTTGTGTGTGTATAT  
GCACAGAACTTGTAACATTTTGCATAATCTGGGCCACCCCATGCCTGCAAGCTTTCTAT  
AAATGTCACCATATTTCTATATCCTAGCGTTTCCCCCTATTTAACTAATTTTCTGATT  
TTCACAACTGGGTGCATAGTATTTGCTTTGGGATGCTACCATCATCCACTTAACCACTT  
CTCTCTAGATCACTGCAGGTTCTTGAGTAGGGGAATAATGTATTGGAACCTTTTTTTTTT  
[-, T]  
GAAGAAAAAAAATAAACAACCTTTTAACTGAGTCTTATGCTTTTTCCCTTTCTTTGCA  
GCATGCTCTTGATGCTGACAATGCGGGAGTCAGTCCAATAGGAACTCTTCCAACAACAG  
CAGCCACTGGGACCTCGGCAGTGCCTTTTTCTTTGCTGGAAGTGTCAATACGACCATAGG  
TACCCGTTTGTGTTGCTAATATCTCTCCTCTGCAGGTCACTTGAGTAAGGGCGCTTAGT  
CAGTGTTTTGTCTCATAGCATACACTATAGTTTGAGGTTTCAAGGAGGCTTACGAAACA

FIGURE 3JJJJ



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85786

ACCTTTTCTTACCTTCCCAGAGACTGTTGCTTTTCATCTGTTTTGATTGTTGATTTTAACA  
CTCATCCCCATGTCTTTAAATATCATGCTTGTGCTACTTCTGGAATTTTCAGTTTTGGGG  
ATTTTTTTTGACTTTCCATTGTGGAAGATGAGGAGTTAGTTCCTTCTTCTGCCTGCCTC  
ATCACAGAAGGGCTCTTTTCTGTCTCTGTCTTCCCAATATTTAATTAGATAGAAGTG  
AAACATCTGCATGATTTTGACTAGATAAATGCTTTCTGCAGCTGATCATAGAGTGAACAG  
[C, T]  
GATGACCTCTTCTGTATCAGTCTTTGTCTTATTTTTTGATGTGTGTCTTTTTTTTCT  
GACACTTGGTGAGTTTGTATTTTTGTCTTAGGGGTTAACTTTATTTATTTATTTATTTT  
ATTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTT  
CCCAGGCTGGAGTGCAGTGGTGCAATCTCGGCTCACTGCAACCTCCGCCTCACGGGTTC  
AGTGATTCTCTTGCCTCATTCTCCTGAGTAGCTGGGATTACAGGCGCCACCACCATGCC

85903

GGGATTTTTTTGACTTTCCATTGTGGAAGATGAGGAGTTAGTTCCTTCTTCTGCCTGC  
CTCATCACAGAAGGGCTCTTTTCTGTCTCTTCCCAATATTTAATTAGATAGAA  
GTGAAACATCTGCATGATTTTGACTAGATAAATGCTTTCTGCAGCTGATCATAGAGTGAA  
CAGTGATGACCTCTTCTGTATCAGTCTTTGTCTTATTTTTTGATGTGTGTCTTTTTT  
TTCTGACACTTGGTGAGTTTGTATTTTTGTCTTAGGGGTTAACTTTATTTATTTATTTA  
[T, -]  
TTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTT  
TCACCCAGGCTGGAGTGCAGTGGTGCAATCTCGGCTCACTGCAACCTCCGCCTCACGGGT  
TCAAGTGATTCTTTCCTCATTCTCCTGAGTAGCTGGGATTACAGGCGCCACCACCAT  
GCCTAGCTAATTTTTGTATTTTTTAGTAGAGATGGGGTTTACCACATTGGCCAGGCTGGT  
CTCAAACCTCCTGACCTCAGGTGATCTGCCCGCTCAGCCTCCCAAAGTGTTGGGATTACC

85906

ATTTTTTTTGACTTTCCATTGTGGAAGATGAGGAGTTAGTTCCTTCTTCTGCCTGCCTC  
ATCACAGAAGGGCTCTTTTCTGTCTCTTCCCAATATTTAATTAGATAGAAGTG  
AAACATCTGCATGATTTTGACTAGATAAATGCTTTCTGCAGCTGATCATAGAGTGAACAG  
TGATGACCTCTTTCCTGTATCAGTCTTTGTCTTATTTTTTGATGTGTGTCTTTTTTTTCTG  
TGACACTTGGTGAGTTTGTATTTTTGTCTTAGGGGTTAACTTTATTTATTTATTTATTT  
[T, -]  
ATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTT  
CCCAGGCTGGAGTGCAGTGGTGCAATCTCGGCTCACTGCAACCTCCGCCTCACGGGTTC  
AGTGATTCTCTTGCCTCATTCTCCTGAGTAGCTGGGATTACAGGCGCCACCACCATGCC  
TAGCTAATTTTTGTATTTTTTAGTAGAGATGGGGTTTACCACATTGGCCAGGCTGGTCTC  
AAACTCCTGACCTCAGGTGATCTGCCCGCTCAGCCTCCCAAAGTGTTGGGATTACCGGC

85908

TTTTTTTGACTTTCCATTGTGGAAGATGAGGAGTTAGTTCCTTCTTCTGCCTGCCTCAT  
CACAGAAGGGCTCTTTTCTGTCTCTTCCCAATATTTAATTAGATAGAAGTGAA  
ACATCTGCATGATTTTGACTAGATAAATGCTTTCTGCAGCTGATCATAGAGTGAACAGTG  
ATGACCTCTTTCCTGTATCAGTCTTTGTCTTATTTTTTGATGTGTGTCTTTTTTTTCTG  
ACACTTGGTGAGTTTGTATTTTTGTCTTAGGGGTTAACTTTATTTATTTATTTATTTA  
[T, -]  
TTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTT  
CAGGCTGGAGTGCAGTGGTGCAATCTCGGCTCACTGCAACCTCCGCCTCACGGGTTCAG  
TGATTCTCTTGCCTCATTCTCCTGAGTAGCTGGGATTACAGGCGCCACCACCATGCCTA  
GCTAATTTTTGTATTTTTTAGTAGAGATGGGGTTTACCACATTGGCCAGGCTGGTCTCAA  
ACTCCTGACCTCAGGTGATCTGCCCGCTCAGCCTCCCAAAGTGTTGGGATTACCGGCGT

85913

TTGACTTTCCATTGTGGAAGATGAGGAGTTAGTTCCTTCTTCTGCCTGCCTCATCACAG  
AAGGGCTCTTTTCTGTCTCTTCCCAATATTTAATTAGATAGAAGTGAAACATC  
TGATGATTTTGACTAGATAAATGCTTTCTGCAGCTGATCATAGAGTGAACAGTGATGAC  
CTCTTCTGTATCAGTCTTTGTCTTATTTTTTGATGTGTGTCTTTTTTTTCTGACACT  
TGGTGAGTTTGTATTTTTGTCTTAGGGGTTAACTTTATTTATTTATTTATTTATTTA  
[T, -]  
TTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTTTATTT  
TGGAGTGCAGTGGTGCAATCTCGGCTCACTGCAACCTCCGCCTCACGGGTTCAGTGATT  
CTCTGCCTCATTCTCCTGAGTAGCTGGGATTACAGGCGCCACCACCATGCCTAGCTAA  
TTTTTGTATTTTTTAGTAGAGATGGGGTTTACCACATTGGCCAGGCTGGTCTCAAACCTC  
TGACCTCAGGTGATCTGCCCGCTCAGCCTCCCAAAGTGTTGGGATTACCGGCGTGAGCC

FIGURE 3KKKK





Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

89478

GTATGCCTGTATAACCTCAGGGTATGTAATTTAGATTTTAATTTGTTACCCGTGATATTTG  
CATTGTGTTTTAGTCGTAGCTCTATAGTTAGATATCATTAAATGTTTCATCTCTAGTCCTTTT  
GCTGTGGTTTTATCTCATGATCACTTACTTGGCTGAAAGTCATCTTCAAGTAGTTGCCTTA  
AGAATGGCTCAGGGGAGCAATATTCTGTGAGATCTTGCATTGTTACAGTTGTAGCTTAA  
CATTGGAAGGATAGTTGAAACAAAATGAAATCCATTTTATTGACTCACATTTTCTTTTTT  
[-, T]  
TTTTTTTTTTGAGACTGGGTCTTGCTCTGTTGTCCAGGCTGGAGTACAGTGGTATGAACA  
TAGCTCACTGCAGTCTCCAACCTCTGGGCCCAAGTGATCTTTTGGCTTCAGCCTCTGAG  
TAGCTGGGACTACAGGCGCATACCACAGGGCTAGCTAATTTTAAAAATATTTTGTAGAA  
GCCAGGTCTTGCTGTGTTGCCAGACTGGTCTCAGACTCCTGGCCTCAAAGGATCCTCCT  
ACCTTGGCCTCCAGAGTGCTAGGATTACATGTGTGAGCCACCACGCCTGGCTTTACATT

89488

ATAACCTCAGGGTATGTAATTTAGATTTTAATTTGTTACCCGTGATATTTGCATTGTGTTTT  
AGTCGTAGCTCTATAGTTAGATATCATTAAATGTTTCATCTCTAGTCCTTTTGCTGTGGTTT  
ATCTCATGATCACTTACTTGGCTGAAAGTCATCTTCAAGTAGTTGCCTTAAGAATGGCTC  
AGGGGAGCAATATTCTGTGAGATCTTGCATTGTTACAGTTGTAGCTTAACATTTGAAGG  
ATAGTTGAAACAAAATGAAATCCATTTTATTGACTCACATTTTCTTTTTCTTTTTTTTTT  
[-, T]  
GAGACTGGGTCTTGCTCTGTTGTCCAGGCTGGAGTACAGTGGTATGAACATAGCTCACTG  
CAGTCTCCAACCTCTGGGCCCAAGTGATCTTTTGGCTTCAGCCTCCTGAGTAGCTGGGAC  
TACAGGCGCATACCACAGGGCTAGCTAATTTTAAAAATATTTTGTAGAAGCCAGGTCTT  
GCTGTGTTGCCAGACTGGTCTCAGACTCCTGGCCTCAAAGGATCCTCCTACCTTGGCCT  
CCCAGAGTGCTAGGATTACATGTGTGAGCCACCACGCCTGGCTTTACATTTTCTTTTTTAA

91631

TTGCTTTTGTGTTTAAAGATCTAGCCTTCAGGACCTATGTTGTTTCTAGGTGAAATCCAGAA  
AGTCATATGCAACAAGAACATTTTGGATGAAGGAAAAATTGCCATTGTTATTTAGAAACAC  
TCTTAATCTAATTATATGACATGCTAGGTTTACACTTGCAAATCTGCAAATATATTTGGTG  
TTAGCTATTAAAAAGTATTCAAGATGCCCATGACACCAGTGGGTCTGGGGCTTAGAAGCCT  
TTTCTGGCACTCTAGGCCAGGTTAGGTGAGCTTAATCCACAGACTCACAGCGTCCAACAA  
[A, G]  
GGAAGCTGGGTGGCCTGACACCATTTAGTATACGGGCAAAAAGTGTTAGCAACCTGAACA  
ACACCAGAGGGCGTTGCTGTAGTGGATCCAAGAAGACCAATGTGAGGTTTCATTGTGTTT  
AGCAGATTGTTAACCTGGGAAAAAGTGTCACGCATTGTAGGAGGATCTATTGTACACCAA  
TTAAAAATTGAGAAAGTCTGGGCCACTTCAAGAAGTACATTTTGGAAAATGCTCTCTGATA  
CCCGGTATTGGATTATGAGACATTAGTGTGTATATTGAAGGAACTCCTAATTTTCTTG

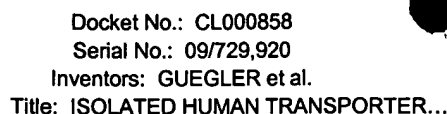
91898

CAGCTTAATCCACAGACTCACAGCGTCCAACAAAGGAAGCTGGGTGGCCTGACACCATT  
AGTATACGGGCAAAAAGTGTTAGCAACCTGAACAACACCAGAGGGCGTTGCTGTAGTGA  
TCCAAGAAGACCAATGTGAGGTTTCATTGTGTTTCAAGCAGATTGTTAACCTGGGAAAAAGT  
GTCACGCATTGTAGGAGGATCTATTGTACACCAATTAATTAAGAAAGTCTGGGCCACT  
TCAAGAAGTACATTTTGGAAAATGCTCTCTGATACCCGCTATTGGATTATGAGACATTA  
[G, C]  
TGTGTATATTGAAGGAACTCCTAATTTTCTTGTTCATGACATGGCTAAATGAATGATC  
TGCTGTGCTGCATTGAAAAACACTATGGCTACATTGGAAGGTGCATTAATGGTATTATTG  
TGTTAGCTTGTTAGGAATCCAGGAACCTGGTTTATGAACAACCTATGTTTATTGATCCAC  
ATAATATTATGTGACTGAGGAATGGTGGCTCCATCTGCCTAATGAAGAAGCTTTGATATG  
CGATGGTTTTTGGCCTTTTTTGTGTGTGTGCTTACACCGAATCTTTGAGTTTGAGCAAA

93506

AATTTTAACTCCAGAGTGGAGGATCTTTATAGAGTCATACAGTTAGAGAATCCAAAGAA  
GCCCTTAATACAATGTAAGTAAGAATAATGAGGTGCAGAAATAATTGTTTTTCCAGTTAC  
TTAGTGGTAAATTCATTTGTTGCATGTGGTCGCAAGGTTTATAAGAAAACCTCAGAGCCCA  
GCAATTCCTCCAGTTCTTCTGAGCAATTTTCCACTAGTTAGGAGTCAGGAAAGAGGAAC  
CGTGAGAGCTGAGGAGCTGTGTATTTCAATTAATTGTGAAATACACAAATATTGGCCTGTT  
[T, C]  
CCTTGGCATCATAAAATTTGCAACGTAATATTGCAGACATTTTTCATATTACTAAAAGTT  
CTTTGAAAAGTGATTCTTTGATGGTTTCTATTGGATCCACTATTCACTATAATCACA  
TATTCCTGGGAACCTAAGCTGTTTCTATTTTAGTAATAGTGTAAACCATGGTGTAAACG  
TTGTGAAGTGTGGTCTTCATCTCTGGTTGTTGCCTTGGAAGGTTACCAAGGGTTTGCTC  
TGTCAAAGGAAATGAAAGGCTTGCCAAATTTCTTTCCAGAAAGGCTCTCATGAGCAGCTT

FIGURE 3MMMM



### FIGURE 3NNNN



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Inventors: GUEGLER et al.  
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95657 TCTCTTCCTGAAAAACGGGGAACCTTTTCTAGCCAGAGGTGAACAGATCTGAGCTCATC  
CTGGTGCTGTGCGTTTCATTACAGCCTCCCTTGGCTGTTTGCCCTTGTGGAGTTGGTTGT  
CTTCTGCTGAAAGTCACCACCTGATGCTGTGGGTGCTATGGGAGAACAGTGAAGTTTCTG  
GAGGGAAGATAGGAATCAACCGCCTGTTTCTCCTGGGACTGAGTTTCTGAGACATA  
TTGCTCAGAAACAATTCTTCCCACAGTAAAGCACAAAGGCAAACGGGGTGCTTAGTTGC  
[A, T]  
TCATATTTACAGGTATTTAATCTTCACATGTAACCTCTTGCTTTGCATGTAACCTCATTTA  
ATCTTTAATAGCTATGGGTAGGCATTTAATAGCCTTGCTCTTTTGATGAAGAAAGTGAGG  
GAGAGAGATTAAGAATGTGCCTATGACCTGAGAGTTGGTAAATAGAAGAATCAGAACAGA  
AATCTGTGTAGTCTCTAGTTCTAGAGCCTACAGACAACCTGTCACACCTTACTTCAAAGTT  
CTACCCAAGCATTCTAGAAGGATGAGCAGGGCAGTCAGAGAGGCGGGGTGTAAC TAGATC

96312 AAGTGCTGGAATTTTCCCAGAGTGACAGTGTTGAGGGTCAAACAGTCTCTCCTTATAGTT  
CACCAAAGGCATGGAGCACAATACTCACACACACGCCCATGCATGAGATACAGCATC  
ACTCAAGAATGATGACTTTCTGTCCACTGGGCAGTGTGTACCAAAGAAAGATGGCTGTG  
AATATATTTAAAGGCTTGTGTTGAGTATTGCATCACTCATGCTCTTACCCAAGAACTTAGC  
TTTAATATTATTTTGTGTTCTAGTCAACAAAACACTGAACAAATAAGGAACCAATTGTG  
[-, A]  
TAATAATAATAATACTTTGCATTGGTACAGTACTTTACAGTCCATTGATTTTTTCCC  
CCCTGCATTTTCCCTTGAGTACCTCTGACACTAGGATTTGCAGATGTTAAGTGGGTCTAAG  
GAGAACTAGGTAGTGTGAGGTGGAATTTGATCCAGATCTTTTCATCTCCTCACTTCTCCCT  
GATGCTCCATGGTAAGCCACAGTGCCTTACCCAGGAGGTGGGTGGGGGTGGTCATCTCTG  
AAAGCTGGAGGAAGGGGTGTAGCACTTGTGAGGATTAATGAGATGCCTGTTTCATCCAGT

96315 TGCTGGAATTTTCCCAGAGTGACAGTGTTGAGGGTCAAACAGTCTCTCCTTATAGTTCAC  
CAAAGGCATGGAGCACAATACTCACACACACGCCCATGCATGAGATACAGCATCACT  
CAAGAATGATGACTTTCTGTCCACTGGGCAGTGTGTACCAAAGAAAGATGGCTGTGAAT  
ATATTTAAAGGCTTGTGTTGAGTATTGCATCACTCATGCTCTTACCCAAGAACTTAGCTTT  
AATATTATTTTGTGTTCTAGTCAACAAAACACTGAACAAATAAGGAACCAATTGTGATA  
[-, A]  
TAATAATAATAATACTTTGCATTGGTACAGTACTTTACAGTCCATTGATTTTTTCCCCC  
TGCAATTTTCCCTTGAGTACCTCTGACACTAGGATTTGCAGATGTTAAGTGGGTCTAAGGAG  
AACTAGGTAGTGTGAGGTGGAATTTGATCCAGATCTTTTCATCTCCTCACTTCTCCCTGAT  
GCTCCATGGTAAGCCACAGTGCCTTACCCAGGAGGTGGGTGGGGGTGGTCATCTCTGAAA  
GCTGGAGGAAGGGGTGTAGCACTTGTGAGGATTAATGAGATGCCTGTTTCATCCAGTTCC

96329 CAGAGTGACAGTGTTGAGGGTCAAACAGTCTCTCCTTATAGTTCACCAAAGGCATGGAGC  
ACAAATACACTCACACACACGCCCATGCATGAGATACAGCATCACTCAAGAATGATGACT  
TTCTGTCCACTGGGCAGTGTGTACCAAAGAAAGATGGCTGTGAATATATTTAAAGGCTT  
GTTTGAGTATTGCATCACTCATGCTCTTACCCAAGAACTTAGCTTTAATATTATTTTGT  
GTTCTAGTCAACAAAACACTGAACAAATAAGGAACCAATTGTGATAATAATAATAAAT  
[-, T, A]  
CTTTGCATTGGTACAGTACTTTACAGTCCATTGATTTTTTCCCCCTGCATTTTCCCTTGA  
GTACCTCTGACACTAGGATTTGCAGATGTTAAGTGGGTCTAAGGAGAACTAGGTAGTGTG  
AGGTGGAATTTGATCCAGATCTTTTCATCTCCTCACTTCTCCCTGATGCTCCATGGTAAGC  
CACAGTGCCTTACCCAGGAGGTGGGTGGGGGTGGTCATCTCTGAAAGCTGGAGGAAGGGG  
GTGTAGCACTTGTGAGGATTAATGAGATGCCTGTTTCATCCAGTTCCAAGCCTCCACTTGT

96370 TTCACCAAAGGCATGGAGCACAATACTCACACACACGCCCATGCATGAGATACAGCA  
TCACTCAAGAATGATGACTTTCTGTCCACTGGGCAGTGTGTACCAAAGAAAGATGGCTG  
TGAATATATTTAAAGGCTTGTGTTGAGTATTGCATCACTCATGCTCTTACCCAAGAACTTA  
GCTTTAATATTATTTTGTGTTCTAGTCAACAAAACACTGAACAAATAAGGAACCAATTG  
TGATAATAATAATAATAACTTTGCATTGGTACAGTACTTTACAGTCCATTGATTTTTT  
[C, T]  
CCCCCTGCATTTTCCCTTGAGTACCTCTGACACTAGGATTTGCAGATGTTAAGTGGGTCTA  
AGGAGAACTAGGTAGTGTGAGGTGGAATTTGATCCAGATCTTTTCATCTCCTCACTTCTCC  
CTGATGCTCCATGGTAAGCCACAGTGCCTTACCCAGGAGGTGGGTGGGGGTGGTCATCTC  
TGAAAGCTGGAGGAAGGGGTGTAGCACTTGTGAGGATTAATGAGATGCCTGTTTCATCCA  
GTTCCAAGCCTCCACTTGTGTTGCTATGTCTGCAATATATTTCTTCTGAGACACTTGGA

FIGURE 30000



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96372 CACCAAAGGCATGGAGCACAATACTCACACACGCCCATGCATGAGATACAGCATC  
ACTCAAGAATGATGACTTTCTGTCCACTGGGCAGTGTGTACCAAAGAAAGATGGCTGTG  
AATATATTTAAAGGCTTGTGTGAGTATTGCATCACTCATGCTCTTACCCAAGAACTTAGC  
TTTAATATTATTTTGTGTTCTAGTCAACAAAACACTGAACAAATAAGGAACCAATTGTG  
ATAATAATAATAATAACTTTGCATTGGTACAGTACTTTACAGTCCATTGATTTTTTTC  
[C, T]  
CCCTGCATTTTCTTGTAGTACCTCTGACACTAGGATTTGCAGATGTTAAGTGGGTCTAAG  
GAGAACTAGGTAGTGTGAGGTGGAATTTGATCCAGATCTTTTCATCTCCTCACTTCTCCCT  
GATGCTCCATGGTAAGCCACAGTGCCTTACCCAGGAGGTGGGTGGGGTGGTGCATCTCTG  
AAAGCTGGAGGAAGGGGTGTAGCACTTGTGAGGATTAATGAGATGCCTGTTTCATCCAGT  
TCCAAGCCTCCACTTGTGTGCTATGTGCAATATATTTCTTTCTGAGACACTTGGACA

96439 AATGATGACTTTCTGTCCACTGGGCAGTGTGTACCAAAGAAAGATGGCTGTGAATATAT  
TTAAAGGCTTGTGTGAGTATTGCATCACTCATGCTCTTACCCAAGAACTTAGCTTTAATA  
TTATTTTGTGTTCTAGTCAACAAAACACTGAACAAATAAGGAACCAATTGTGATAATAA  
TAATAATAATACTTTGCATTGGTACAGTACTTTACAGTCCATTGATTTTTTCCCCCTGC  
ATTTTCTTGTAGTACCTCTGACACTAGGATTTGCAGATGTTAAGTGGGTCTAAGGAGAAC  
[T, C]  
AGGTAGTGTGAGGTGGAATTTGATCCAGATCTTTTCATCTCCTCACTTCTCCCTGATGCTC  
CATGGTAAGCCACAGTGCCTTACCCAGGAGGTGGGTGGGGTGGTGCATCTCTGAAAGCTG  
GAGGAAGGGGTGTAGCACTTGTGAGGATTAATGAGATGCCTGTTTCATCCAGTTCCAAGC  
CTCCACTTGTGTGCTATGTCTGCAATATATTTCTTTCTGAGACACTTGGACAACCTATA  
TTCCCCAAAGTTAGGCTATTGTGAGACAGTCAAGCTGGGGTCTTCAGTGTTCACAAGT

96468 TGTACCAAAGAAAGATGGCTGTGAATATATTTAAAGGCTTGTGTGAGTATTGCATCACT  
CATGCTCTTACCCAAGAACTTAGCTTTAATATTATTTTGTGTTCTAGTCAACAAAACAC  
TGAACAAATAAGGAACCAATTGTGATAATAATAATAATAACTTTGCATTGGTACAGTA  
CTTTACAGTCCATTGATTTTTTCCCCCTGCATTTTCTTGTAGTACCTCTGACACTAGGA  
TTTGCAGATGTTAAGTGGGTCTAAGGAGAACTAGGTAGTGTGAGGTGGAATTTGATCCAG  
[G, A]  
TCTTTCATCTCCTCACTTCTCCCTGATGCTCCATGGTAAGCCACAGTGCCTTACCCAGGA  
GGTGGGTGGGGTGGTGCATCTCTGAAAGCTGGAGGAAGGGGGTGTAGCACTTGTGAGGAT  
TAATGAGATGCCTGTTTCATCCAGTTCCAAGCCTCCACTTGTGTGCTATGTCTGCAATAT  
ATTTCTTTCTGAGACACTTGGACAACCTATATTTCCCCAAAGTTAGGCTATTGTGAGACAG  
TCAAGCTGGGGTCTTCAGTGTTCACAAGTTACTTGAATGTTTCCAAGAGTCACCATAA

96501 AAAGGCTTGTGTGAGTATTGCATCACTCATGCTCTTACCCAAGAACTTAGCTTTAATATT  
ATTTTGTGTTCTAGTCAACAAAACACTGAACAAATAAGGAACCAATTGTGATAATAATA  
ATAATAATACTTTGCATTGGTACAGTACTTTACAGTCCATTGATTTTTTCCCCCTGCAT  
TTTCTTGTAGTACCTCTGACACTAGGATTTGCAGATGTTAAGTGGGTCTAAGGAGAACTA  
GGTAGTGTGAGGTGGAATTTGATCCAGATCTTTTCATCTCCTCACTTCTCCCTGATGCTCC  
[A, G]  
TGGTAAGCCACAGTGCCTTACCCAGGAGGTGGGTGGGGTGGTGCATCTCTGAAAGCTGGA  
GGAAGGGGTGTAGCACTTGTGAGGATTAATGAGATGCCTGTTTCATCCAGTTCCAAGCCT  
CCACTTGTGTGCTATGTCTGCAATATATTTCTTTCTGAGACACTTGGACAACCTATATT  
CCCCAAAGTTAGGCTATTGTGAGACAGTCAAGCTGGGGTCTTCAGTGTTCACAAGTTA  
CTTGAATGTTTCCAAGAGTCACCATAAACCTGCATAAAGTGAACCTGTAGAGGCTCATTT

97217 TTTTGCATATTTAAATCAAAATCCTGGTGAAGTAAAGGAAATACAAGATGAGGAAGCCTAG  
CCTGAACACTCATTTTAGAAATGGAAGCTGTAATTTAGATTATTATAAGAGGTTTGAATG  
ATTGAGAACAGAAGATTGCAAAAGAAAGTATCCAGGTGACTCATTCCGAAGGCAGAAGG  
CAACCGTGAGTTCTGCAGGCCTGTGGGTGGCTGAATGATGGAATAACCATCAACGTTTTT  
TTATCATGTTGCATTCCCAACCTGTCAATAACCATGGACCAATAACTCACTCATTTGAAT  
[A, G]  
GATTGAGAAACAGGCCCCACATGATTTACCCAGATTTGGGAGAATGGTTAGATTACTGTG  
TAGATACTTTTAAACATAAGATTGTAATATCAATTGGCACAAAAATGAATATTAATTAAT  
TTAGACTTTTCATCTCCATATAAAGTGTGCTAATGCTATAGGACTTTTCTTCCAGCAATA  
CTTTCTTTAGCCTCATCCATATAGGGTAAGCCAGTACTCATTGTACATAAATTACTTAT  
GTAATGTCAGTACTCTTAAGATTGCAGATGCGGGTATTTTCAAAGCACTATTTGAAATAC

FIGURE 3PPPP





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Title: ISOLATED HUMAN TRANSPORTER...

97449

ACGTTTTTTTATCATGTTGCATTCCCAACCTGTCAATAACCATGGACCCAATAACTCACT  
CATTGAATAGATTAGAAACAGGCCCCACATGATTACCCAGATTGGGAGAATGGTTAG  
ATTACTGTCTAGATACTTTTAAACATAAGATTGTAATATCAATTGGCACAATAAATGAATA  
TTAATTAATTTAGACTTTCATCTCCATATAAAGTGTGCTAATGCTATAGGACTTTTTCTT  
CCAGCAATACTTTCTTTAGCCTCATCCATATAGGGTAAGCCAGTACTCATTGTACATAA  
[A, G]  
TTACTTATGTAATGGCAGTACTCTTAAGATTGCAGATGCGGGTATTTTCAAAGCACTATT  
TGAAATACATATTAGTAGACCTGACTATAAAAAGATTCTCTTGTAATCAAACATCCATCA  
ATAAACTTTTAGCATCTTATTACCCTCAATGCAAGAGGTAGTTGGGTGGAGAGGTAGGAC  
TCAGAGATGATGTGGAGTTCCAGTAAAGAGAAAAAAGAACCAGATGGGGCGAACTTC  
ACTGGCGGTGGGGAGAGACAGCACAAAGCCTTCCCTTCCCTATTCTTCTGTTTTTAGA

98167

GAGCCCATGGGTAAGACTGTGAAAAAGAAGCTCTTGTCAAATCTAATAAGTGCAGTGGTG  
ATTCTTCCCACGCATTCCAGTCTCGCTAAACTAGACATGCCCATGATGCTTGGTGTTC  
AGAAAAAGGTGGTATCACTTTTTGTGAGAAATGAAATGAAAGTTCTGAGTGACCATGAA  
TTTCTTAAATGTGTTAATATCCAAGAAACCTTAAACCGTTTATAAGGGGAGAAGGAAG  
AGAAGCAATGGAACAATGTTGCGAATTGTAGAGGGCCTTTGAAATGAAGTTCTACTCCCT  
[A, G]  
AAGTCTATAAGGTGGGGGAATGTACAAACTTTTAAAAAGTCTGTGAGTTCTTTGGTCAG  
TATGCTAATTTCTCTGCCACTCTCCCTCTTTTTCATATTTCTCACCAGGGTATGGGAATA  
TTGCTCCGAGCACTGAAGGAGGCAAAATCTTTGTATTTTATATGCCATCTTTGGAATTC  
CACTCTTTGGTTTTCTTATTGGCTGGAATTGGAGACCAACTTGAACCATCTTTGGGAAAA  
GCATTGCAAGAGTGGAGAAGGTGTTTCGAGTGAGTACTGTGTCATATTTAAATTTAACC

98430

AATTGTAGAGGGCCTTTGAAATGAAGTTCTACTCCCTAAAGCTCATAAGGTGGGGGAATG  
TACAAACTTTTAAAAAGTCTGTGAGTTCTTTGGTCAGTATGCTAATTTCTCTGCCACTC  
TCCCTCTTTTTCATATTTCTCACCAGGGTATGGGAATATTGCTCCGAGCACTGAAGGAGG  
CAAAATCTTTTGTATTTTATATGCCATCTTTGGAATCCACTCTTTGGTTTCTTATGGC  
TGGAAATGGAGACCAACTTGAACCATCTTTGGGAAAAGCATTGCAAGAGTGGAGAAGGT  
[G, C]  
TTTCGAGTGAGTACTGTGTCATATTTAAATTCTAACCCTGCGATCCAATTGGCTTTAGC  
CTGACAGGATCCAGGAGGCACTATCAGGGGCATTGTCTGCTTTTAAATGGAATAATTTAA  
TGTTATGATTGTATTTTCTGTTTTGGCCAATGGAAGTCAAACATCTTGCACCTAAACTC  
CCTCTTTGAGTAGCTTCTATTTTAGAGTGATATTTCTGCAATCACAACACAAGAGGGT  
TAAGTATGGATTTGCCAACACAGATTTTGAAGAGGTGAGACAAGTTCAGTTTCTCCTT

98846

TTTAATGTTATGATTGTATTTTCTGTTTTGGCCAATGGAAGTCAAACATCTTGCACCTA  
AACTCCCTTCTTTGAGTAGCTTCCATTTTATAGAGTGATATTTCTGCAATCACAACACAAG  
AGGGTTAAGTATGGATTGCAACACAGATTTTGAAGAGGTGAGACAAGTTCAAGTTTC  
TCCTTCAAGATGGAAGATGGGGTTCCTCATTGTGTTTGAATGATGTAGAAAAGTGTAA  
TCCATCAATTTTGTGTTGGAACCTCCCTTACTCCGTTTTATTTTCAAGCACAGTGTCTTC  
[T, C, A]  
GGCTAATCCTGCTTCTTCCAGAAGCCTGACTTCTCCAGACACTGCTCTGTGCTTTGCACC  
TGTCTCCTAATGGTCTCTCTCTCTCCCATCTCTCACTGCTGAGTGCTCCCTCAGAAATGG  
CATCCTGATGTACTACTTCTACTGAACTGTTGATGATTGCTATTGCCTTAGTGGGTTTT  
TTCTTTCTGGAATATTTATCTTTAAACAAGAGACAACTATCTCAACTCAAGGAATTTAT  
TTACTAAAATTAATAATTAATAAAATTATTCCTGGCATTAGTTGCAGGCATGAGTGGC

99326

TTTCCTTTCTGGAATATTTATCTTTAAACAAGAGACAACTATCTCAACTCAAGGAATTTA  
TTTACTAAAATTAATAATTAATAAAATTATTCCTGGCATTAGTTGCAGGCATGAGTGG  
CTGAGTGATTAAACCGGGGTTCCCAATGCCCTTTAACTCGCACTCATTGTATGCTTTCA  
CAGAACACCTGTTTTGCTCAGATGTAAGGTCACTTCTGCCCTCTTACTCACCCTGACCT  
AATTCTCAAGTCTTTCAAACCTTCCCTCAGGGAATGCTTTCTTATGATGACTTAATATTTA  
[C, A]  
AAATGACATTCTGAGGTCTTTTCCAGGATCTAGGAATGGTGGCCAAAGGCAGATCAGCTG  
GAAGCTCTAAAGCTGTGCTTTTTTCCCCCTCTAAGAACTCTTAACTTTGAGTTCAAGGC  
TGTCTCTGCAATAATGGCTCATACTTCTCTTTAGAAGAATGCAAGGGAGCTTTGAGATGA  
GCAGTTTCAGAGGCTTTTAAAAAGAGTAGAATGGGAGGAACGAGGCACCATAGCTGGGT  
GAGCCATTTTATAATCTCACTGATCCTGGGTGAGTGCCTCAGTTTACTCATCCAAAA

FIGURE 3QQQQ



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Title: ISOLATED HUMAN TRANSPORTER...

99514 CTGTTTTGCTCAGATGTAAGGTCACCTTCTGCCCTCTTACTCACCGCTGACCTAATTCTCA  
AGTCTTTCAAACCTTCCTCAGGGAATGCTTTCTTATGATGACTTAATATTTACAAATGAC  
ATTCTGAGGTCTTTTCCAGGATCTAGGAATGGTGGCCAAAGGCAGATCAGCTGGAAGCTC  
TAAAGCTGTGCTTTTCCCCCTCTAAGAACTCTTAACTTTGAGTTCAAGGCTGTCTCT  
GCAATAATGGCTCATACTTCTCTTTAGAAGAATGCAAGGGAGCTTTCAGATGAGCAGTTT  
[C, T]  
AGAGGCTTTTTTAAAAAGAGTAGAATGGGAGGAACGAGGCACCATAGCTGGGTGAGCCATT  
TTATAATCTCACTGATCCTGGGTGAGCTGCCTCAGTTTACTCATCCACAAAAGGGGATAG  
AATTTGAATCTACTTTGTGAGGTTTGGTGATGATTAAATGAAATGATGTGTGGAAGA  
GCTGTGCATATAGGGCAGACATATAGAGCCAGGGCTTCTGTGTTTCTCTCAAGAGAAG  
CCCTCATGGGCAGGCTAGCCACTCATCCGGGTTTCATCTGAGGAGCTCTGTGGTGTGTGA

99680 TCAGCTGGAAGCTCTAAAGCTGTGCTTTTTTCCCCCTCTAAGAACTCTTAACTTTGAGT  
TCAAGGCTGTCTCTGCAATAATGGCTCATACTTCTCTTTAGAAGAATGCAAGGGAGCTTT  
CAGATGAGCAGTTTCAGAGGCTTTTAAAAAGAGTAGAATGGGAGGAACGAGGCACCAT  
GCTGGGTGAGCCATTTTATAATCTCACTGATCCTGGGTGAGCTGCCTCAGTTTACTCATC  
CACAAAAGGGGATAGAATTTGAATCTACTTTGTGAGGTTTGGTGATGATTAAATGAAAT  
[G, A]  
ATGTGTGGAAGAGCTTGTGCATATAGGGCAGACATATAGAGCCAGGGCTTCTGTGTTT  
CTCTCCAAGAGAAGCCCTCATGGGCAGGCTAGCCACTCATCCGGGTTTCATCTGAGGAGC  
TCTGTGGTGTGTGAGTTTACTGGAATGTCCACAGCCTTTGCTCCTTCATGCTGGCTGG  
CCGGTGGCCTCATTAGACTGTGCACCTGGGCTCCCGAGTAGTCTCCATGGAACCATCAG  
TGCTCAGCTTCCCTGCTTTTCAGATGTTTAGTTCTTCTAAACCAGACATAGCAGCCCTG

99879 AATCTCACTGATCCTGGGTGAGCTGCCTCAGTTTACTCATCCACAAAAGGGGATAGAATT  
TGAATCTACTTTGTGAGGTTTGGTGATGATTAAATGAAATGATGTGTGGAAGAGCTT  
GTCATATAGGGCAGACATATAGAGCCAGGGCTTCTGTGTTTCTCTCCAAGAGAAGCCCT  
CATGGGCAGGCTAGCCACTCATCCGGGTTTCATCTGAGGAGCTCTGTGGTGTGTGAGTTT  
TACTGGAATGTCCACAGCCTTTGCTCCTTCATGCTGGCTGGCCGGTGGCCTCATTAGAC  
[T, C]  
GTGCACCTGGGCTCCCCAGTAGTCTCCATGGAAACCATCAGTGCTCAGCTTCCCTGCTTT  
TCAGATGTTTAGTTCTTCTTAAACCAGACATAGCAGCCCTGTCTCCAAGAACTCTTTGA  
ACTTCTTGAAGCACCCTTTTAGCTGCTGCCTCATGGCCCTCTGACTTAGAGAAAAAGA  
ATCTGGTAGTTTGAACACTCAGAACAGGATTCAATTGGGGAAATGACTGATCTGGCATT  
TTATTTTATGTAGCTTCTTTAGAGCTCAGTTTCTTATTTGTAGAAGAAAGGATTGGAC

99971 AAATGAAATGATGTGTGGAAGAGCTTGTGCATATAGGGCAGACATATAGAGCCAGGGC  
TTCTGTGTTTCTCTCCAAGAGAAGCCCTCATGGGCAGGCTAGCCACTCATCCGGGTTTCA  
TCTGAGGAGCTCTGTGGTGTGTGAGTTTACTGGAATGTCCACAGCCTTTGCTCCTTCA  
TGCTGGCTGGCCGGTGGCCTCATTAGACTGTGCACCTGGGCTCCCCAGTAGTCTCCATGG  
AAACCATCAGTGCTCAGCTTCCCTGCTTTTCAGATGTTTAGTTCTTCTTAAACCAGACAT  
[A, G]  
GCAGCCCTGTCTCCAAGAACTCTTTTGAACCTTCTTGAAGCACCCTTTTAGCTGCTGCCT  
CATGGCCCTCTGACTTAGAGAAAAAGAATCTGGTAGTTTGAACACTCAGAACAGGATT  
AATTGGGGAAATGACTGATCTGGCATTTTTATTTTATGTAGCTTCTTTAGAGCTCAGTT  
TCCTTATTTGTAGAAGAAAGGATTGGACTAAAAGTTTTTGAATCCTCCTTAGCAGAAAA  
AATTCTAGTTACTATATTTGAAGTGATGGAAGAGGTGCAATCATCTGGACATCTGCTAC

100895 TCCTGCAGCAGTTTGCTTGCTGCATGTAAAGTTTTGGTAGAAAATCTCAGTTTTCTGCCA  
TTGATTTAACTACATTTAAAAGTCCAATTACGTTTAGGTGGTTATTTGAGAAATGAAAA  
TTGTATAAGCTAACAAAGCTTGGGGTTGTGAATTTTAGTTCTCATGGGGGAAGGTTTAT  
GTATTTCTTCTGCTCAATGAGTGTAAAGCCCTTCTCTGATCTGTTATGTTTTCTCTCAG  
CTCTTGGGAAGAGAGGATTTACGGTGGAGTAAAAATAAAATCTAAAGTTGGCTTTCTGCC  
[G, A]  
GGCATGGGTGGCTCACACCTGTAATCCTAGCAGTTTGGGAGGCTGAGGTGGGTGGATCACC  
TGAGGTGAGAAGTTCAAGACCCTCTGGCCAAGATGGTGAAACCCTGTGAGTACTAAAAA  
TACAAAAATTTGCAGGGCACGGTGGTGCATGCCGTGAATCCAGCTACTTGGGAGGCGGA  
GGCATTAGAATTGCTTGAACCCAGGAGGTGGAGGTGTCAGTGAGTTGAGATCGTGCCACT  
GCACTCCAACCTGGGTGACAGGGTGGAGCCCTGTATTAATCAATCAATAAATAAAG

FIGURE 3RRRR



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

100927 TTTGGTAGAAAATCTCAGTTTTCTGCCATTGATTAAACTACATTAAAAAGTCCAATTAC  
GTTTAGGTGGTTATTGAGAAATGAAATTTGTATAAGCTAACAAAGCTTGGGGTTGTGAA  
TTTTTAGTTCTCATGGGGGAAGGTTTATGTATTTCTTCTGCTCAATGAGTGTTAAGCCCT  
TCTCTTGATCTGTATGTTTTCTCTCAGCTCTTGGGAAGAGAGGATTTACGGTGGAGTAA  
AAATAAAATCTAAAGTTGGCTTTCTGCCGGGCATGGTGGCTCACACCTGTAATCCTAGCA  
[G, C]  
TTTGGGAGGCTGAGGTGGGTGGATCACCTGAGGTGAGAAGTTCAAGACCATCCTGGCCAA  
GATGGTGAAACCCTGTCTAGTACTAAAAATACAAAAATTTGCAGGGCACGGTGGTGCATGC  
CTGTAATCCCAGTCACTTGGGAGGCGGAGGCATTAGAATTGCTTGAACCCAGGAGGTGGA  
GGTTGCAGTGAGTTGAGATCGTGCCACTGCCTCCAACTGGGTGACAGGGTGAGCCCT  
GTATTAATCAATCAATAAATAAAGTAAATATAAAGTTGGTCTTCAAGATGCCTGAA

102805 AAAATGAACAGGATTACATAATTGTTTTGAGCTAATTATCCTTGAATACAAGGATCAATA  
ACAAGGGTGATGCCAGTCCAAGGTTGGACAGTCAGTTGCTGGGTAGATGTCTTCGCAGAA  
ATGCTTTTCTGCATAACGAGGTGATGGGTTTTGTGCAAGGTTGTAGTTTTTGCAGTCTTT  
TATGATAGCTCTTGAATCAGGCATTGTGTCATGAGAATCCTTCCTTCTGGCTTTCCCT  
GACTCTGTTTGTCTAGAGTTTAAAGCACAAGTAACCCCATTTTGATCTGACAATTTTCAT  
[G, A]  
CTCCCAACACTCATTAACAATGGGTTAAGAATTTGAACCCCTTATCTCACATAGCAAGAAG  
CCTGGAGGTACGTTGACTCAGGCTTGTGCTATCAGCTCCACAATGTCAGGTGTATCCAGA  
TTTGTACCTCTTCTGCTCTGTTTTCTTGGCATGGTAGCTCTTCATCCTCAGACTTGT  
CACTCATTGCAAGATGGCTGCTTCATGACCAATAGCACGTTTTCACCCAACCTCATA  
TCAGGAAATACAAAAGGAACCTCCCTTAAATTTATCTTTTTTTAGAGCAGTTGCATATTC

103462 CATGTGCAGTCTCCCTCATTATCAACATCCCGCACCAGACTGGTACATTTGTTACAATTT  
ATGAACCTACATTGATGCATCATTATCACCTAGAGTCCATAGTTTACATTAGGGTCACT  
CTTGGTGTGTAGAGTCTATGAATTTGGACAAATTTATAATGACATGCGTCTACCATTAT  
AGTATCATACATAGTATTTCACTCTCCTAAAAATCCTCTGTACCCTGCTTGTTCATCAAT  
CCCGTTCTCCTAACCTTTGACAATGACTCATGTTTTTATTAGTTTTGTCTTTTCCAGAAT  
[G, T]  
TCATTAATATGGTTTGGCTGTGTCCCAACCAATCTCAACTTATATCTCCAGAATTCC  
CATGTGTTGTGGGAGGGACCCAGGGGAGGTAGTTGAATCATGGGGGCCAGTCTTTCCCTG  
TGCTATTCTCATGATAGTGAATAAGCCTCACGAGATTTGATAGGCTTATCAGGGGTTTCT  
GCTTTTGCTTCTTCTCATTTTTCTTGTCTGCCACCATGTAAGAAATACCTTTCACCTC  
CCACCATGACTCTGAGGCCTCCCAGCCATGTGGAAGTGAAGTCCAATTAAGCCTCTTT

103811 TCCCAAGATTCCCATGTGTTGTGGGAGGGACCCAGGGGAGGTAGTTGAATCATGGGGG  
CAGTCTTTCTGTGCTATTCTCATGATAGTGAATAAGCCTCACGAGATTTGATAGGCTTA  
TCAGGGGTTTCTGCTTTTGTCTTCTTCTCCTCATTTTTCTCTTGTCTGCCACCATGTAAGAAAT  
ACCTTTCACCTCCCAACCATGACTCTGAGGCCTCCCAGCCATGTGGAAGTGAAGTCCAA  
TTAAGCCTCTTTTGTTCAGTTTTCAGATATGTCTTTATCAGCAGCGTGAAAACGGACT  
[G, A, T]  
ATACAGTTGTGTAGTTGGAATCATACTGTATGTAGCCTTTTCAGACTGGCTTATTTCACT  
TAAATATGGATAAAAGTTTCTCTATGTCTTTTCATGGCTTGTAGTCCATTTCTGCTGGG  
TGGTGAATAATATCCATTTTCTGGGTGTACCATAGTTTATGTATCCATTACCTACTGA  
AGGACATCTGTTTGTCTTAAGTTTGGTAATTACGAATAAAGCTGATATAAACCTCTG  
TGACAGGTTTTTGGTTGAACATTAGTTTTCACTCCTTTAGTTAAATACAAAGATGTG

105461 CCTGTGCCATTTGTTGAAAAGACCTTTTTTTTTTTTCTCCATGTTGTCGCCTTTGCTCCT  
TTGTCAAAGGTAAGTTGACTATATTTATGTGGTTCTATTTTGGGCTCTCTATTCTAGTTC  
ATTGACCTATTTGTCTATTCTTTCTCCAATATCATACTGTCTTGATTACTTTCTGCTCTAT  
AGTAATTGTAGACGGA  
GTCTCGCTCTGTGCGCCAGGCTGGAGTGCAGTGGCAGCATCTCGGCTCACTGCAAGCTCC  
[G, C]  
CCTCCCGGGTTTACGCCATTCTCTGCTCAGCCTCCCAAGTAGCTGGGACTACAGGCGC  
CCGCCACTACGCCCGGCTAATTTTTTGTATTTTGTAGTAGAGACGGGTTTACCGTTTTTA  
GCCGGGATGGTCTCGATCTTCTGACCTCGTGATCCGCCCGCTCGGCCTCCCAAAGTGCT  
GGGATTACAGGCGTGAGCCACCGCGCCCGGCCACGCTCTATAGTAATTCTTAAAGCCAGT  
TAGTGTCTAGTCTCCAAATTTTTTTCTTTTCAATATTGTGTTGACATCAGTCTCTTT

FIGURE 3SSSS



105981 ATAGTAATTCTTAAAGCCAGTTAGTGTCTAGTCCTCCAATTTTTTCTTCTTTTCAATAT  
TGTGTTGACATCAGCTCCTTTTATGGAAGAAAAATCTTTCCAGAGTTACCCTGTAGAT  
TTCCCTTCTGTCTCATTGACCAGAAATGAGATCACATTAGCATCTGCAAGGGAGGATAGG  
AAAGGAAGTATCGGACAAAGGACGATAGTATTGCCATAATGGACCAGTGATTCTCAAAGT  
TTGGTCCCTCAACCTTAGGCATCAGTATCCCTTGACCATCGGCATCGGCATCCACTGGA  
[A, G]  
ACTTGTTAGAAATGAAAATTATTTGTGGTCTGTTGGGGCGGTGGGGCTGGAGCTCAGC  
AATCTGTGTTTACCAAGCTGTCCAAGTGATTCCAATGCTTAAGGAGCAGAGGAATCATGT  
TTTCATCTCTTGGGCTGAACACATTGCTGTGATGAACAAAATTAGAATTCTGTTAGCGAA  
GAAGTTGGAGTAAGCAAATGATAACGTCTCACATAGATGTCAATTAAGTCTAGCCACTG  
AGATCACTCATAGAGAAGATGTCTTCACTCTTCTTGTCTATAAATTAGGTGGCTGTTGGG

106495 TAGATGTCAATTAACTGCTAGCCACTGAGATCACTCATAGAGAAGATGTCTTCACTCTTC  
CTTGTCTATAAATTAGGTGGCTGTTGGGATCCTTGAATCAATCAAGATAAGCTAGCCTATC  
ACAAACAGCCTACTCCCACTCCTGCCAGATCTGCTGCAACCCAGGCAGCTTCTCAGGCTC  
AGGGGCTAGATAGGGTGGGGGAAACAGCTGAGCGCTGCTTGTCTGGCTCTTCAGAGCGTTG  
TCCCTCAGGTAGAGCCCATTGGCCCAGCTAGTTACCAGGTCCCATTCGTAGCTGCAAAG  
[G, T]  
GGGTTTGAATGCATTCTTTTATCTCCAAGAATAGTAGTGGATGGTAAAATTGTTGCGCA  
CTGGTATAGTCATGTTTCATATGCTCTAAGATGCACTCCTGGGTCCCACTCTAGGGTGACC  
AGCCTTTTCAGGAATTTAGTTCCAGGTGCTTGTGTCATCACTCTTCGGGGGGAATACTACT  
ATTTGTGAGACTCATAGATTTTACACCTGAGAAAATGGAGCCTGTGAGGTGACTTGCTGG  
ATCCACACAGTGAATTGGTGGTAGGACCTGGATTAGAACCCTAATCCTGCCTTAACCTC

107077 CTAATCCTGCCTTAACCTCTTCCAGATGGGCTGAAAATATTAATGTCAGATTAATCTACA  
CCATGAAACCAATGTGGAGTTTAGAATATTTTAGTATACCATATAATTAAAGTAAAAAT  
AATCTTCTCTGAGTTCCAGGGAAATATCTGGGCAGTTAGCATCCCAAATATCTGCTTAT  
TTGGGATGAAGGAGGGCTGACATTGGATTCTGAAGCAGGTTTTTGAAGCAGGCGGCTCT  
TTCTCCCTGCTGTGGGGTAGCTGTCTTGTCTGGGCCAGGCTGATTATCACTTGATAGGAT  
[G, A]  
CTGTAGGAAAACCAAGTCAAATCTGGACTGATTCTCATTTTTCTTGGCTCCAAGCTGGACT  
TTGGCCTCTGGTAGGAAGTACCTGCTTCTTTTTTCCGGCTCGGATCAGCAGGCTTCTG  
GTATTTCTGTAAACCAAGGGACACCTTTTTTTTTTTTTCTTTTTCTTTTTTGGCTTT  
CCCCCGCCCCAAGGATATGGCAGAAATGTTTATTGCTTATGGATCCAAATGATTCTGG  
GTGTCATGACAAATAATAAAACATTACCCTAGACTTACGAGTGCCAAAATTACTTGGAA

107431 CTGGACTTTGGCCTCTGGTAGGAAGTACCTGCTTCTTTTTTCCGGCTCGGATCAGCAGG  
CTTTCTGGTATTTCTGTAAAACCAAGGGACACCTTTTTTTTTTTTTCTTTTTCTTTTT  
TGGCTTTCCCCCGCCCCAAGGATATGGCAGAAATGTTTATTGCTTATGGATCCAAATG  
ATTCTGGGTGTCACTGACAAATAATAAAACATTACCCTAGACTTACGAGTGCCAAAATTA  
CTTGGAAAATTTAGAACAGGCCACATGTTTAAAGATGGAAGTGATGACAATCTCAAAGTGC  
[T, G]  
AATACGGTTAAATTAGTGGACTGATCAACCACTTTAGATTCCAGGAAGGGGCATGTGGCG  
GAAGCCAAAGACTCCTGCAGGCCTCTGCCATGTGCCTGGCATGGATCAAGGAGAGGCTTT  
TAAGAACACAATTGGCAGGAAGCTTCTGTTTCTCCAAGGCATCTTTGAGCTAGCATTC  
GCAGCAAAGGGTTAACTTAAATAAATTACTATTTCAAGAGGCAGGCGCAGTGGTCCACA  
TCTGTAATCACAGCTCTTTGGGAGGCCAAGACAGAAGGATTACTTGAGCCCGGAGTTCA

107671 CTTGGAATTTAGAACAGGCCACATGTTTAAAGATGGAAGTGATGACAATCTCAAAGTGC  
TAATACGGTTAAATTAGTGGACTGATCAACCACTTTAGATTCCAGGAAGGGGCATGTGGC  
GGAAGCCAAAGACTCCTGCAGGCCTCTGCCATGTGCCTGGCATGGATCAAGGAGAGGCTT  
TTAAGAACACAATTGGCAGGAAGCTTCTGTTTCTCCAAGGCATCTTTGAGCTAGCATTC  
AGCAGCAAAGGGTTAACTTAAATAAATTACTATTTCAAGAGGCAGGCGCAGTGGTCCAC  
[A, G]  
TCTGTAATCACAGCTCTTTGGGAGGCCAAGACAGAAGGATTACTTGAGCCCGGAGTTCA  
AGACCAGCCTGGGCAACATAGTGAGACCCCATCTCTGAAAAAAAAGAAAATCGAGCCC  
GGGCGTGGTGGCTCATGCCTGTAATCCAGCACTTTGGGAGGCAGAGGCAGGCAGATCAC  
TTGAGGTGAGCAGTTTGAAGACAGCCTGGCCAACATGATGAAACCTGTTCTACTAAAA  
ATACAAAATTAGCCTGGCATGGTGGTGTGTGCTTATAGTTCTAGCTACTCGGGAGGCTG

FIGURE 3TTTT



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

108826 CCATATGTCTCTGGAGTATCTGCTTCTATGTCATGCCTGCCCTAGTACATACCATATTAT  
AAGTTCCCTAACAACTAACTCAGTAGGATTAATGTTACATAATAATGTGAGTTTATTTATT  
TATTTATTGAGACGGAGTCTCACTCTGTTGCCAGGCTGGAGGGCAGTAGCATGATCTCG  
CCTCACTGCAACCTCCGCCTCTTGGGTTCAAGCGACTCTCCTGCCTCAGCCTCCTGAGTA  
GCTGCGGCTACAGGCGCGTGCCACCATGCCTGGCTAATTTTTGTATATTTTAGTAGAGA  
[C, T]  
GAGGTTTCACCATATTTGGCCAGGCTGGTCTCGAACTCCTTACCTCGTGATCTGCCACCT  
TGGCTTCCCAAACCTGCCGGGATTACAGGCATGAGCCACCACGCCCTGCCGTGAGTTTATT  
TTTATCAGAGAGAAGGCCCTGGTTTTAATGTAAACAATTGCTTTCTTCTTTTCTAGGC  
GGCAAGAAGGTAGGAAGTAATTATTTGAAAATGCAAATAATTTTAAAGCTTTATCAATCA  
AGTCTGTTCCAAATTAGTTTAAGGATTTTCTGTAGCTTTAATGATAGGGCCAGAATGTAC

111310 TAAAAGGATTTTAGTTTTCTGACTTCATGCTCTCTCTCAGTGTGTTGAATTGCATCATAG  
CCTCTGGTTCTTTATGTATCTGCTTTAGTTCCCTAATACCAGCTCATTATTAGTTAATAT  
CTCTTTCTTTGTGTTCTCTTTTCTTGGAGGTTAATCTAAGATTTAGGTGTCCCTTGCTC  
ATGTCTGCTGCTATGTGACTAATACAAAGATGGGTTTATATTCTGGTATCACTATAGGAC  
ATTTAAAGTAATGTCAAAAACCACAATTACTTTTGTACCAACCTAATAAAAGAGGGGCTT  
[T, A]  
TACTGTACCAATAGCTGACTTGTTTTTGACCCACCTCTGCGAGAGCAGTTGCCAGGCAAAG  
ATAGTCCCCACTCTGTTCTTCCATCCACTGCTCTACTTTGTACAACCTGCTTAATGTTAA  
AAACAGGAGGAATGCACAGCTCAAAGCCAAGCCTCTTGGTGCCCTGAGATAGCTGGCCT  
TGTCTTCCAAAGCATTTCTTTCTTTTCTGGGCTCATCAGAATGCCTCAATGCTCTGCTTCG  
ATGGTTTTAAGAGCATAGAGTGGCTTGGTGTGGTGACTCAAGCCTGTAATCCAGCACTT

112035 CCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCACTTGAACCTGGGAGGCGGAGGTTGCA  
GTGAGCCAAGATCACACCACTGCACTCCAGCCTGGGCAACACGAGTGAAACTCTGTCTCA  
GTAATAATAATAATAATAATAATAATAATAATAATAATAATAAAAGTAAAAATAAAAG  
AGCATAGAGTTTGAGACCATCACCAAGATTTTAATTCCTGAGGATTTAACTCAG  
TCCTAAACTCAAGGCTGCTATGTCAAGTAGTATTAAATATCTCTTCTTTAAGAGCCA  
[T, -]  
TTAGCTCTTCTCATATCTTTTCTGATTTTCTGCTGTTTCCCTAAGGCTTCTGAACTCT  
TAAACATCTCTGATAGAGGAACTATCTAGAAAATTTTATGGGTATTCTATTATCAGTGA  
GGTCTTTCTCATTGAAGAGATAATCACTTCTTAGAATCCAGGGGTTTCATTAAGTATTA  
ATAAAAGGTTTTATATTTTGCATTTTGGGGCTAGTGAAAGTCTAGTGATGCTTTAGGTC  
TACAACATGGTAACTGTATTTAAAGATTCCAGGTGCTTTTGAGTTATGAATTTAATGCA

112038 AGCTACTTGGGAGGCTGAGGCAGGAGAATCACTTGAACCTGGGAGGCGGAGGTTGCAGTG  
AGCCAAGATCACACCACTGCACTCCAGCCTGGGCAACACGAGTGAAACTCTGTCTCAGTA  
ATAATAATAATAATAATAATAATAATAATAATAATAATAATAAAAGTAAAAATAAAAGAGC  
ATAGAGTTTGAGACCATCACCAAGATTTTAATTCCTGAGGATTTAACTCAGTCC  
TAACTCAAGGTCTGCTATGTCAAGTAGTATTAAATATCTCTTCTTTAAGAGCCATTT  
[T, -, A]  
GCTCTTTCTCATATCTTTTCTGATTTTCTGCTGTTTCCCTAAGGCTTCTGAACTCTTAA  
AACATCTCTGATAGAGGAACTATCTAGAAAATTTTATGGGTATTCTATTATCAGTGAGGT  
CTTTCTCATTGAAGAGATAATCACTTCTTAGAATCCAGGGGTTTCATTAAGTATTAATA  
AAAGGTTTTATATTTTGCATTTTGGGGCTAGTGAAAGTCTAGTGATGCTTTAGGCTAC  
AACATGGTAACTGTATTTAAAGATTCCAGGTGCTTTTGAGTTATGAATTTAATGCAAGA

112066 TCACCTGAACCTGGGAGGCGGAGGTTGCAGTGAGCCAAGATCACACCACTGCACTCCAGC  
CTGGGCAACACGAGTGAAACTCTGTCTCAGTAATAATAATAATAATAATAATAATAATAA  
TAATAATAATAATAAAAGTAAAAATAAAAGAGCATAGAGTTTGAGACCATCACCAAGGA  
TTTTAATTCCCACTGGGATTTAACTCAGTCCCTAACTCAAGGTCTGCTATGTCAAGTAG  
TATTAATATCTCTTCTTTAAGAGCCATTTAGCTCTTCTCATATCTTTTCTGATTTT  
[G, T]  
CTGGTTTTTCCCTAAGGCTTCTGAACTCTTAAACATCTCTGATAGAGGAACTATCTAG  
AAAATTTTATGGGTATTCTATTATCAGTGAGGTCTTTCTCATTGAAGAGATAATCACTTCT  
TAGAATCCAGGGGTTTCATTAAGTATTAATAAAAGGTTTTATATTTTGCATTTTGGGG  
CTAGTGAAAGTCTAGTGATGCTTTAGGTCTACAACATGGTAACTGTATTTAAAGATTCC  
AGGTGCTTTTGAGTTATGAATTTAATGCAAGAATTCTATTAGCAATCACATTTTACTAG

FIGURE 3UUUU



Docket No.: CL000858  
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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

- 114098 AAGTTGAGATCACTGGTCTTTCAAGTTAGCATCAATTTCCATGACATTCTGGGCTTTCTT  
TTTTCTGTGGATTAAACATTTTCATCCTGGCCATAGTCATTGTTACAAAGATTTTTTTTT  
TTTTTTTTTGAAGTCTAGCTCTGTTGCCAGGCTTGACTGCAATGGCACAGATCTC  
GGCTCACTGCAACCTCTGCCTCTCAGGTTCAAGCAATTCTCCTGCCTCAGCCTCCCAAGT  
AGCTGGGATTACAGGCACCTGCCACTGCCCTGGCTAATTTTTGTATTTTTAGTAGAGACG  
[G, A]  
GGTTTCACCATTTTTGTCCAGGCTGGTCTCAAACCTCTGGACCTCATGATCCACCTGCCTC  
GGCTCCCAAAGCACTGGGATTACAGCCGTGAGCCACCGCGCTGGCCAGAAGTTTTCTT  
TTCTCTAAGTTACTCCCAGGAGTTGGTAGGATACTTTAGAGCCTGCTTCAAGATTTCT  
TTATGCCTTTTTTAATTGTGTTAAAGTGTGCACAACATAAAATTTACCATCCTGTTTT  
AAGTGACAGTTCACTGGCATTAAAGTACATTACATTGTTGTGCAACCATCACTACCATC
- 114293 CTGCCTCTCAGGTTCAAGCAATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGG  
CACCTGCCACTGCCCTGGCTAATTTTTGTATTTTTAGTAGAGACGGGTTTACCATT  
GTCCAGGCTGGTCTCAAACCTCTGGACCTCATGATCCACCTGCCTCGGCCTCCCAAAGCA  
CTGGGATTACAGCCGTGAGCCACCGCGCTGGCCAGAAGTTTTCTTTCTCTAAGTTAC  
TCCCAGGAGTTGGTAGGATACTTTAGAGCCTGCTTCAAGATTTCTTTATGCCTTTTTTT  
[A, -]  
ATTGTGTTAAAGTGTGCACAACATAAAATTTACCATCCTGTTTTAAGTGACAGTTTCA  
TGGCATTAAAGTACATTACATTGTTGTGCAACCATCACTACCATCATCTCCAGAACTTT  
CCATCTTCCCAAATGACAACCTCTGAGTCTGTTCAATAATAACTGCTCATTTCTCTCCCC  
CAGCTCCCTGGTGACCACCATTTCTACTTTCTGTGTCTATGAATTTCACTCCGGAAC  
CTCATGTCAATGGAGTCATATAGTGTGTCCTTTTGTGTCTGGCCTATTTCACTTAGCA  
CAGTGTCTTTAAGGCTTCATGAATATTGCACATGTGTGAGAATTTCCCTTCTTTCAAGGC  
TGAGTAATATCCCCCTGTCTGTATATACCACATTTGCCTATTTGTTATCTGTTGATGG
- 114413 GTCCAGGCTGGTCTCAAACCTCTGGACCTCATGATCCACCTGCCTCGGCCTCCCAAAGCA  
CTGGGATTACAGCCGTGAGCCACCGCGCTGGCCAGAAGTTTTCTTTCTCTAAGTTAC  
TCCCAGGAGTTGGTAGGATACTTTAGAGCCTGCTTCAAGATTTCTTTATGCCTTTTTTT  
AATTGTGTTAAAGTGTGCACAACATAAAATTTACCATCCTGTTTTAAGTGACAGTTCA  
GTGGCATTAAAGTACATTACATTGTTGTGCAACCATCACTACCATCATCTCCAGAACTTT  
[-, C, T]  
CCATCTTCCCAAATGACAACCTCTGAGTCTGTTCAATAATAACTGCTCATTTCTCTCCCC  
CAGCTCCCTGGTGACCACCATTTCTACTTTCTGTGTCTATGAATTTCACTCCGGAAC  
CTCATGTCAATGGAGTCATATAGTGTGTCCTTTTGTGTCTGGCCTATTTCACTTAGCA  
CAGTGTCTTTAAGGCTTCATGAATATTGCACATGTGTGAGAATTTCCCTTCTTTCAAGGC  
TGAGTAATATCCCCCTGTCTGTATATACCACATTTGCCTATTTGTTATCTGTTGATGG
- 114414 TCCAGGCTGGTCTCAAACCTCTGGACCTCATGATCCACCTGCCTCGGCCTCCCAAAGCAC  
TGGGATTACAGCCGTGAGCCACCGCGCTGGCCAGAAGTTTTCTTTCTCTAAGTTACT  
CCCAGGAGTTGGTAGGATACTTTAGAGCCTGCTTCAAGATTTCTTTATGCCTTTTTTTA  
ATTGTGTTAAAGTGTGCACAACATAAAATTTACCATCCTGTTTTAAGTGACAGTTCA  
TGGCATTAAAGTACATTACATTGTTGTGCAACCATCACTACCATCATCTCCAGAACTTT  
[-, C]  
CATCTTCCCAAATGACAACCTCTGAGTCTGTTCAATAATAACTGCTCATTTCTCTCCCC  
AGCTCCCTGGTGACCACCATTTCTACTTTCTGTGTCTATGAATTTCACTCCGGAAC  
TCATGTCAATGGAGTCATATAGTGTGTCCTTTTGTGTCTGGCCTATTTCACTTAGCAC  
AGTGTCTTTAAGGCTTCATGAATATTGCACATGTGTGAGAATTTCCCTTCTTTCAAGGC  
GAGTAATATCCCCCTGTCTGTATATACCACATTTGCCTATTTGTTATCTGTTGATGGA
- 114692 TACCATCATCTCCAGAACTTTTCCATCTTCCCAAATGACAACCTCTGAGTCTGTTCAATA  
TAACTGCTCATTTCTCTCCCCAGCTCCCTGGTGACCACCATTTCTACTTTCTGTGTCTA  
TGAATTTCACTCCGGAACCTCATGTCAATGGAGTCATATAGTGTGTCCTTTTGT  
GTCTGGCCTATTTCACTTAGCACAGTGTCTTTAAGGCTTCATGAATATTGCACATGTGT  
AGAATTTCTCTCTTTCAAGGCTGAGTAATATCCCCCTGTCTGTATATACCACATTTGC  
[C, T]  
TATTGTGTTTATCTGTTGATGGACTTTTGGGCTGTTTCCACTTTTTGTTGTTATGAATA  
TGCTGCTATGAACATGGGTGTATAAACATCTATTCAAGTCCCTGTTTTAATTATTTGG  
ACATATACCCAGCAGTGAATTTGCTGAGTCACATATAATTACAGATTTAATTTTTCTGAG  
GAACCGTGACACTGTTTTCTACAGTGGCTGCACCATTTTCACTTCCACCAACAATGCCC  
AGGGATTCTGTCTTTCCACTTCTCACCACACTTGTCTTTTTCTGTTTTTTTTTTTTTT

FIGURE 3VVV



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115696 GGTCAACTTGATAAAACAATTATCGAATAACACTTTTGTGTGTGTTCTCAACACTATAG  
GGATATGTGGCAATAAAACAAGGGATAGTCCTTTCTCTTAAGGAGAAAACAGCCATGCATC  
AAGACCAGTGTCCATAATATTGTGCAGAATGATACCAGGGCTAGGGCAGGCAGGCTCTGA  
AGTCACACCACCTGGGTGAATGATCCATGCTATGTCTACTTCTTATCAGCTATGTGACC  
TCAGGCTGTGCCTCAGTTTTCTTATTTGAAAAAATGAGGATAAATAGGTTCTGTCTGT  
[A, T]  
TTGGCACTTAGTTGACACTTGAGAGCAGTGTCTGCCACATAGCCTCAATCAATGCTATTCT  
ACTATTATTGTAGAACACTGTTAGCTATGGGAGCCAGAGAGGGACTTGTAAAGTCTAGC  
TTGTATATTTTACATCACACAAGCACCTGCCTTGTCTTGCCAATGGATTGTTCTGCTCAA  
GTAAAGCATAGGGGCTTAAAGCTAAATGTTACTGTGCCTTTATTGGCCTGTATCCCTGTA  
GGACCTGCTCAGTGCTAAGTGCTTTGGAGGTGTTCAAGTAAATATTATTGATTGTGAATT

116153 TTGCCAATGGATTGTTCTGCTCAAGTAAAGCATAGGGGCTTAAAGCTAAATGTTACTGTG  
CCTTTATTGGCCTGTATCCCTGTAGGACCTGCTCAGTGCTAAGTGCTTTGGAGGTGTTCA  
GTAATATTTATTGATTGTGAATTGATTAGAGAGGAGAGAGACCGAACAGGTCTTTTT  
CCAAGCACCCAGGATGTGTAAGCTTCACAAATGAAGAGATGCTTGTGATGCTGCCCTCT  
GTCCTACCTTCCCTGAAATGGGCATGGAGGTGGGTGGGGCTGGAGAAGTGGAGGGGGCC  
[A, C]  
CAGAAAGGGTAGCGACAGAGAGAAAGAAACCCATGGGCAACAGGGTCTGTATCTGGGACG  
GGACCTCAGCCATCAAGCATGGCCTTGGGAGGAGAAGATGCACTGGCCGCGATGCAGCGA  
GCCCTTTTCGAAAGGCAACAGCACAAAGCAAGAGTGCAGACGGCAGGTTTCGTCCGCTCCTC  
TGGGGCTCCCCAGGGGATGCCGTTGCCATTCCGTTCTGCGTGAAGGAGGCAGGTTGTCTT  
CTTCGTCGTCCGCCACACTTCACTGGCTGCAAGTGTTACGCAGATGTGCTCATGTGATC

116213 CCTTTATTGGCCTGTATCCCTGTAGGACCTGCTCAGTGCTAAGTGCTTTGGAGGTGTTCA  
GTAAATATTTATTGATTGTGAATTGATTAGAGAGGAGAGAGACCGAACAGGTCTTTTT  
CCAAGCACCCAGGATGTGTAAGCTTCACAAATGAAGAGATGCTTGTGATGCTGCCCTCT  
GTCCTACCTTCCCTGAAATGGGCATGGAGGTGGGTGGGGCTGGAGAAGTGGAGGGGGCC  
ACAGAAAGGGTAGCGACAGAGAGAAAGAAACCCATGGGCAACAGGGTCTGTATCTGGGAC  
[G, A]  
GGACCTCAGCCATCAAGCATGGCCTTGGGAGGAGAAGATGCACTGGCCGCGATGCAGCGA  
GCCCTTTTCGAAAGGCAACAGCACAAAGCAAGAGTGCAGACGGCAGGTTTCGTCCGCTCCTC  
TGGGGCTCCCCAGGGGATGCCGTTGCCATTCCGTTCTGCGTGAAGGAGGCAGGTTGTCTT  
CTTCGTCGTCCGCCACACTTCACTGGCTGCAAGTGTTACGCAGATGTGCTCATGTGATC  
TTACCACATACGCAGATTCTAGTAAAAAAGAAGAAAAAATCCAAGAATGAGTGAGAATT

116507 TGGGACGGGACCTCAGCCATCAAGCATGGCCTTGGGAGGAGAAGATGCACTGGCCGCGAT  
GCAGCGAGCCCTTTCGAAAGGCAACAGCACAAAGCAAGAGTGCAGACGGCAGGTTTCGTCTG  
GCTCCTCTGGGGCTCCCCAGGGGATGCCGTTGCCATTCCGTTCTGCGTGAAGGAGGCAGG  
TTGTCTTCTTCGTCGTCCGCCACACTTCACTGGCTGCAAGTGTTACGCAGATGTGCTCA  
TGTGATCTTACCACATACGCAGATTCTAGTAAAAAAGAAGAAAAAATCCAAGAATGAGT  
[G, A]  
AGAATTTATTTTAGCTACATGCTGACTGCCTCTCAGCTTGCCCGTGCTCTTACCAGATCT  
TGAAAAACAAGGGCCAGTTTGTATTTTATAAAAAATGCATCAAAGTGTTACTAAAAGATCC  
TAAAGGAAGACTAAAGTTTCTCCGAAAAGAAGCCTGGCCCTTCAAATACCAACAAGGGA  
TCCTCGGAAGATGGGTTTTACTGAGCTCAAACACTGTCTCTTCTGTTTAGATACTGTATT  
ATTACATCATTTCCCTCTCAGATTGAGTGATGTTTCCCTCATTATTGTTCCGTTCCCT

116796 CAAGAATGAGTGAGAATTTATTTTAGCTACATGCTGACTGCCTCTCAGCTTGCCCGTGCT  
CTTACCAGATCTTGAAAAACAAGGGCCAGTTTGTATTTTATAAAAAATGCATCAAAGTGTT  
ACTAAAAGATCCTAAAGGAAGACTAAAGTTTCTCCGAAAAGAAGCCTGGCCCTTCAAAT  
ACCAACAAGGGATCCTCGGAAGATGGGTTTTACTGAGCTCAAACACTGTCTCTTCTGTTT  
AGATACTGTATTATTACATCATTTCCCTCTCAGATTGAGTGATGTTTCCCTCATTATTT  
[G, T]  
TTCCGTTCTTGGCAGAAGTGAATTTCAACATGAACAAACATCTGCAGTCTTTCTATACGA  
GCCTGGGGAATGCTTGAAAGAACTGATACTAAATTATTATTATTAATATTGTTTGTCTA  
CCTATCCACTCCCCACCCCAAGTCCCTCTCACTCCGAGTAGTCACAAATGGGTGTAT  
CGGGCATCTCGTCTCAGTTGTGAGACTGTCCCTTCTCATTCTAAACTATTTTGCAGATT  
AGCTTGAGCAATTAGAATCAGGAATAGATATCATGTGGTTAAAAATAAAGGAATTTATC

FIGURE 3WWWWW



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Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

117142 AGTCTTTCTATACGAGCCTGGGGAATGCTTGAAAGAACTGATACTAAATTATTATTATTA  
ATATTTGTTTGTCTACCTATCCACTCCCCACCCCAAGTCCCCTCTCACTCCCGAGTAGT  
CACAAATGGGTGTATCGGGCATCTCGTCTCAGTTGTGAGGACTGTCCCTTCTCATTCTAA  
ACTATTTTGCAGATTAGCTTGAGCAATTAGAATCAGGAATAGATATCATGTGGTTAAAT  
AAAAGGGAATTTATCTACAATTTGAAAATAGATTACAGAGAACTTCCATGTGATTTTTTT  
[T, A]  
AAAAAATAAATTTTGTCTGTGTACTATAACAGAGTTGGCACCAGAGCTAACAAAAAAGG  
CAAGTATCAACATTTAAATGTCAGTACATGACATGTAAATGCCATATGGTATTCTTGCAA  
TGTATTACCACTTTCTTTCTGGCATCCTTTTCTGACATTGCTGTATGCTTCTTGACTC  
TGCTGCTCTTCAGAAAGCCTCAATTGTCCTGAGCCCTTAATTCTGTATTTATATTAGGT  
GTCTCTCTCTTTTATCTACCCTTTGGAGGCTTATCAACCTTTTCCCAAGGAAGAGGAAG

118270 GCAAATAACATCTTGTAGACCCCAAGAATAACATTCATCTCACTGTATTGATGGTGGGCA  
TCCCCATCAGCCTATGAGTTGTGTGAGGTCGGGTCCCCTCTGCCTGTTCACTGCATC  
TTCAGGTGCTAGCACATGGCCTGGAACCCAGAGAGCACTTAATCCATACCTTGATGAATCA  
ATGAATGAACATTGCTAGACATAACCTTATACATCTTGATATAGAAAATGACCTTGAAGC  
TGGACTAGGTCCCAGTTACTTGAGAGGCTGAGGCTGGAGGATCAGCCAGCTTGGGCAGC  
[G, C, A]  
TAGTGAGACATCCCCTATCCCTCCTACTCTCCTAATCCTGCACAATCCCCCTCTAAAAA  
AGATAAACAGAGTGACCTTGGGCTGGCGCTGTGGCTCGCGCTGTAATCCAGCACTTTG  
GGAGGCTGAGGCGGGCGGATCATGAGGTCAGGAGATCGAGACCATCTGGCTAACATGGT  
GAAACCCCGTCTCCTCTAAAAAATACAAGAAAATTAGCCGGGCGGATGGCGGGCCCTG  
TAGTCCAGCTGCTCGGGAGGCTGAGGCAGGAGAATGGCGTGAACCTGGGAGGCGGAGCT

118495 AAATGACCTTGAAGCTGGACTAGGTCCCAGTTACTTGAGAGGCTGAGGCTGGAGGATCAG  
CCCAGCTTGGGCAGCATAGTGAGACATCCCCTATCCCTCCTACTCTCCTAATCCTGCACA  
ATCCCCCTCTAAAAAAGATAAACAGAGTGACCTTGGGCTGGCGCTGTGGCTCGCGCCTG  
TAATCCCAGCACTTTGGGAGGCTGAGGCGGGCGGATCATGAGGTCAGGAGATCGAGACCA  
TCTTGGCTAACATGGTGAAACCCCGTCTCCTCTAAAAAATACAAGAAAATTAGCCGGGCG  
[C, T]  
GATGGCGGGCCCCCTGTAGTCCCAGCTGCTCGGGAGGCTGAGGCAGGAGAATGGCGTGAAC  
CTGGGAGGCGGAGCTTGCAAGTGAGCCGAAATTGCACCACTGCATCCGGCCTGGGCGACA  
AAGTGAGAATCTGTCTCAGAAAAAAGAGAGTGACCTTGAATCGAA  
ACTAGTATTGTATGCAAATAAATGGCAATGGGGAAAAAAGTTCTTAGGCTTTGAAGTCC  
AATTATTTTGAATAAAAGATGGGTCTGTAGGGAGCTGCTCCCTGCTAATGCTTATTGCCA

119314 AGATAATTCTGAAAAATTCAATGCAAATTTCTAGCTATAATATAAAGGAGAAATAAATG  
GAAAGTAATGTTTCAATAATAGGTGCTCTGTTATGAAACCCTAGGAGACCTGCTGAAGCA  
GTGAGTCTTGGCATCTATACGTAGAATGCAATATCTCCAAATGCAGATTGGTTACAGGTAT  
GTTGTGTTGATGACTAAGATGTCACAAAGGACTTTTCTCCAGTGGTGTGGTTTTCCAAA  
ATAGAGAACAACCTCTCAGCAAGTTCCAGCTAATCTATTTACATTAGAGTCAGATTCTTA  
[A, T]  
AAAATTTGGTCAACTTTGAAAAGATGCAACAATTTGTGTGTGTCTTCACATGTAATA  
GGGAGTTAGGTTCTTGGCTCAGATAATTGTAGACATGAGTTTTTCTCAGTGGGACATTCA  
AAGCTCATGCTAAATGTGGGATGGTTCTGTGATTTGTGGCACTGATTGTTGTATTGCAGG  
ACATCTGAACGCTTTGACCTCCTCCAGTACATGCCAAACGTGCCCTCCAGTTGTGAC  
AACCAGAAACACCTAACAAGTTAGAGACCACCTCCTAGGGTGTGTAATCTAAACAGG

119740 CATGCTAAATGTGGGATGGTTCTGTGATTTGTGGCACTGATTGTTGTATTGCAGGACATC  
TGAACGCTTTTGACCTCCTCCAGTACATGCCAAACGTGCCCTCCAGTTGTGACAACCG  
CAACACCCTAACAAGTTTAGAGACCACCTCCTAGGGTGTGTAATCTAAACAGGGTTAT  
AAACAGAGCTTCCAGGGGGCTCCCATGTAACTTTCAAGAATTTACATATTTAATTCTAT  
TCTCGTGAAAATGGCCATGTTCCAATAGTTAAGCCTCTTCCCTTGATGTATTCCCATGC  
[T, C]  
ATTAATATTCACTTCTATTCCACAAATATTTATTATATGCATATGTGTGTGTACATCCAT  
CTGACTATACCTTTCTATGTTATGTACCTTTACTAGAATTCCAAATTATAAAATCCTGTC  
AGTTTATCTCTTGCTAGATGAATGGTTTTATTGTTTTGTAGAATATTTGCTTTAAACAG  
TACTCTCATATTTTCTTGAGGTGCTAAAAATAGAGGAGGCAGCTGTAGAAAAATGCACTAC  
GGGCCAGGCGTGGTGGCTTATGCCTATAATCCAGTACTTTGTGAGGCCAATGTGGGCGG

FIGURE 3XXXX





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119899 TTGTAATCTAAACAGGGTTATAAACAGAGCTTCCAGGGGGCTCCCATGTAACTTTCAAGA  
ATTTACATATTTAATTTCTATTCTCGTGAAAATGGCCATGTTCCAATAGTTAAGCCTCTT  
CCCTTGATGTATTTCCCATGCCATTAATATTTCAGTTCTATTCCACAAATATTTATTATAT  
GCATATGTGTGTACATCCATCTGACTATACCTTTCTATGTTATGTACCTTTACTAGAA  
TTCCAAATTATAAAATCCTGTCTAGTTTATCTCTTCTAGATGAATGGTTTTATTGTTTTT  
[G, A]  
TAGAATATTTGCTTTAAACAGTACTCTCATATTTTCTTGAGGTGCTAAAATAGAGGAGGC  
AGCTGTAGAAAAATGCACTACGGGCCAGGCGTGGTGGCTTATGCCTATAATCCCAGTACT  
TTGTGAGGCCAATGTGGGCGGATCATGAGGTCAAGAGATTGAGACCATCTGGCCAACAT  
AGTGAAACTCCATCTTACTAAAAATACAAAAATTAGCTGGGCATGGTGGTGCATGCCTGT  
AGTCCCAGCTACTCGGGAGGCTGAGGCAGAAGAATCACTTGAACCCGGGAGGCAGAGGTT

119990 ATGGCCATGTTCCAATAGTTAAGCCTCTTCCCTTGATGTATTTCCCATGCCATTAATATT  
CAGTTCTATTTCCACAAATATTTATTATATGCATATGTGTGTACATCCATCTGACTATA  
CCTTTCTATGTTATGTACCTTTACTAGAATTCCAATTATAAAATCCTGTCTAGTTTATCT  
CTTGCTAGATGAATGGTTTTATTGTTTTTGTAGAATATTTGCTTTAAACAGTACTCTCAT  
ATTTTCTTGAGGTGCTAAAATAGAGGAGGCAGCTGTAGAAAAATGCACTACGGGCCAGGC  
[G, A]  
TGGTGGCTTATGCCTATAATCCCAGTACTTTGTGAGGCCAATGTGGGCGGATCATGAGGT  
CAAGAGATTGAGACCATCTGGCCAACATAGTGAAGTCCATCTTACTAAAAATACAAAA  
ATTAGCTGGGCATGGTGGTGCATGCCTGTAGTCCAGTACTCGGGAGGCTGAGGCAGAA  
GAATCACTTGAACCCGGGAGGCAGAGGTTGCAGTGAGCCGAGGTCACGCCATTGCATCC  
AGCCTGGGTGACAGAGTAAGACTCCATCTCAAAAAAAAAAAAAAAAAAAGAAAAGAAAA

120169 TCTTGCTAGATGAATGGTTTTATTGTTTTTGTAGAATATTTGCTTTAAACAGTACTCTCA  
TATTTTCTTGAGGTGCTAAAATAGAGGAGGCAGCTGTAGAAAAATGCACTACGGGCCAGG  
CGTGGTGGCTTATGCCTATAATCCCAGTACTTTGTGAGGCCAATGTGGGCGGATCATGAG  
GTCAAGAGATTGAGACCATCTTGGCCAACATAGTGAAGTCCATCTTACTAAAAATACAA  
AAATTAGCTGGGCATGGTGGTGCATGCCTGTAGTCCAGTACTCGGGAGGCTGAGGCAG  
[A, G]  
AGAACTCACTTGAACCCGGGAGGCAGAGGTTGCAGTGAGCCGAGGTCACGCCATTGCACTC  
CAGCCTGGGTGACAGAGTAAGACTCCATCTCAAAAAAAAAAAAAAAAAAAGAAAAGAAA  
AGAAAAGAAAAATGCACTGTGCCAGGCACCTAGAACATTGAGATGAAGGAGCACACTGTG  
TAGTAGGGAGACACATGGATGGATGGACAGACAGTGTATGCAGTTGAGCAGTTCTATGGA  
CAGGGGACCATGCAAGGGTGAAGGAACATGGACAGCAGAGAGCAAGAACTGGAGAGGGCT

120519 CCATTGCACTCCAGCCTGGGTGACAGAGTAAGACTCCATCTCAAAAAAAAAAAAAAAAAA  
AAGAAAAGAAAAGAAAAGAAAATGCACTGTGCCAGGCACCTAGAACATTGAGATGAAGG  
AGCACACTGTGTAGTAGGGAGACACATGGATGGATGGACAGACAGTGTATGCAGTTGAGC  
AGTTCTATGGACAGGGGACCATGCAAGGGTGAAGGAACATGGACAGCAGAGAGCAAGAAC  
TGGAGAGGGCTTCTGCAAGAGGTAATGTGAGAATTGTGTGTGAGGAATGAACAGGAGTC  
[C, T]  
GACAAGCATTAAAAAGGGCGAAGAACCCTTATCCTAGCAGATGGAACAGCCCTTAAAAGGG  
CACAGAAGCTAAAAAGAAATGAGCTATGAAGCCATGAGAAGATGTAGAGGAATGTAAAT  
GCATATTGCTGCGTGGAAGAAGCCAATCTGAAAAGGCTACATGCAGTATGATTCCAACCTA  
CATGACATTCTAGAAAAGTCTAAACTATGGAGACAGTTACAAAGATCCATGATTGCCAAG  
AGCCTGGGGGAAGAGAGGGATGAATCGGTGGAGCAGAGAGGATTTTATAGGCTAGGGAAAC

120812 AGGAGTCCGACAAGCATTAAAAAGGGCGAAGAACCCTTATCCTAGCAGATGGAACAGCCCT  
TAAAAGGGCACAGAAGCTAAAAAGAAATGAGCTATGAAGCCATGAGAAGATGTAGAGGAA  
TGCTAAATGCATATTGCTGCGTGGAAGAAGCCAATCTGAAAAGGCTACATGCAGTATGAT  
TCCAACCTACATGACATTCTAGAAAAGTCTAAACTATGGAGACAGTTACAAAGATCCATGA  
TTGCCAAGAGCCTGGGGGAAGAGAGGGATGAATCGGTGGAGCAGAGAGGATTTTATAGGCT  
[A, G]  
GGGAAACTATTGTGTATGATACTATAATGGTGGATACATGTCTCAGACGTTTGTCCAAA  
CCCATAGGATGTACAGCACCAACAGTGAACCTAATGTATACTATGGATTCTGGATGATA  
TTGTCAGTATAGGCTCATCACTTGTAAACAGTGCCTACTCTGGCATGGGATGTTGATAG  
TGGGGAAGGCTGTGCATGTTTGGGGCGGGGCTATATGGGAGATCTCTGTACCTTTCTCT  
TAATTTTGCTGTGAAGCAAAAATGGTTCTAAAAAATCAAATCTTGAAAAAGGCACTGAA

FIGURE 3YYYY



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Inventors: GUEGLER et al.  
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121053 TGCCAAGAGCCTGGGGGAAGAGAGGGATGAATCGGTGGAGCAGAGAGGATTTTTAGGCTA  
GGGAAACTATTGTGTATGATACTATAATGGTGGATACATGTCATCAGACGTTTGTCCAAA  
CCCATAGGATGTACAGACCAACAGTGAACCCTAATGTATACTATGGATTCTGGATGATA  
TTGTCACTATAGGCTCATCACTTGTAAACAGTGCCTACTCTGGCATGGGATGTTGATAG  
TGGGGAAGGCTGTGCATGTTTGGGGCGGGGCTATATGGGAGATCTCTGTACCTTTCTCT  
[T, C]  
AATTTTGCTGTGAAGCAAAAATGGTCTAAAAAATCAAATCTGAAAAAGGCACTGAAG  
TATAAAATGGAGCAGTATTGGGGACCAATAAACCATCCAGTCTCTCCAGAAGTGCAGAAC  
TAACTGCTACTACAGCAAGAGAGAGGGGTGAGCAACTACCTGCCTGCAGCGGGGGTAGGG  
GGGAGTTGGGGGAAATGGCGGGGGGTGGGGTCCCTGACAGTTTCTCAGAAGTGGGTTG  
ACGTATTCTGGAGGAGGAGGAGGAGGAGGCAGCATGAGGCAGCAGGCAGGATGCATTTCT

121246 CTCATCACTTGTAAACAGTGCCTACTCTGGCATGGGATGTTGATAGTGGGGAAGGCTGT  
GCATGTTTGGGGCGGGGCTATATGGGAGATCTCTGTACCTTTCTCTTAATTTTGCTGTG  
AAGCAAAAATGGTCTAAAAAATCAAATCTTGAAGGCACTGAAGTATAAAATGGAG  
CAGTATTGGGGACCAATAAACCATCCAGTCTCTCCAGAAGTGCAGAACTAACTGCTACTA  
CAGCAAGAGAGAGGGGTGAGCAACTACCTGCCTGCAGCGGGGTAGGGGGAGTTGGGGG  
[G, A]  
AATGGCGGGGGGTGGGGTCCCTGACAGTTTCTCAGAAGTGGGTTGACGTATTCTGGAG  
GAGGAGGAGGAGGAGGCAGCATGAGGCAGCAGGCAGGATGCATTTCTTGAAGTGGATCAT  
GGCCAGGTCCTTACAGCTCTCCACTGCCACCTTTGGCAAACATTCCTGGGATCCTGAAG  
GCTCAGACAAGGCCCATCCCTCTTATGTTACCATGGGGATTATCTCTTCTCTTTCTC  
TTTTAGTTTTCTCTCAAGGAAGGGTTGTCACTCCTTTTCCAAAGGAAGAAGGACCAAG

121475 AACTGCTACTACAGCAAGAGAGAGGGGTGAGCAACTACCTGCCTGCAGCGGGGTAGGGG  
GGAGTTGGGGGAAATGGCGGGGGGTGGGGTCCCTGACAGTTTCTCAGAAGTGGGTTGA  
CGTATTCTGGAGGAGGAGGAGGAGGAGGCAGCATGAGGCAGCAGGCAGGATGCATTTCTT  
GAACTGGATCATGGCCAGGTCCTTACAGCTCTCCACTGCCACCTTTGGCAAACATTCCT  
GGGATCCTGAAGGCTCAGACAAGGCCCATCCCTCTTATGTTACCATGGGGATTATCTCTT  
[C, T]  
CTCCTTTTCTCTTTTAGTTTTCTCTCAAGGAAGGGTTGTCACTCCTTTTCCAAAGGAA  
GAAGGACCAAGTGAATGATTTTCAAGGGCACAGTGCTGTTATTTCTCGAGGGAACCTCTG  
CCATGTTCTTGAGCATGTTGCTCGTTTTCTCCTTCCCTTCTCTTCTTAGCCCTCTCCCTC  
TCGCTCTCTCTACCTCTCCCCCTTTCTTTTCTTTTCTTTCATCACAAGACTACAAAGAGT  
ATACATGGTCACTGTAGAGGCCCTTGGAAAATGCAGGGGAGTGCAAAGAAGAAAGTAAAT

121715 GGGATCCTGAAGGCTCAGACAAGGCCCATCCCTCTTATGTTACCATGGGGATTATCTCTT  
CCTCCTTTTCTCTTTTAGTTTTCTCTCAAGGAAGGGTTGTCACTCCTTTTCCAAAGGA  
AGAAGGACCAAGTGAATGATTTTCAAGGGCACAGTGCTGTTATTTCTCGAGGGAACCTCT  
GCCATGTTCTTGAGCATGTTGCTCGTTTTCTCCTTCCCTTCTCTTCTTAGCCCTCTCCCTC  
TCGCTCTCTCTACCTCTCCCCCTTTCTTTTCTTTTCTTTCATCACAAGACTACAAAGAG  
[T, A]  
ATACATGGTCACTGTAGAGGCCCTTGGAAAATGCAGGGGAGTGCAAAGAAGAAAGTAAAT  
CCTGTAAATATCCTTTGTCCAAAGAAATCCACCACTAACACGTTGATAATCGTACTTCTG  
AATCTTTTCTCTGCATCTACATTTGGCCCCAATGCCTGGTGCTCCACTGGCCCCCAGTA  
CCCCCTCCACCTGCTACCTACCTGTCCAAGTTTCCCTGCCCTCGGGTACTGGCAGGGGT  
TGTCACCGTGTCTGGCCACAGCCTGTGCCTTCCCTGTGTTACTCCATCAGCTCCTTCTG

122390 TTCTGCCTCAGAAGGGGGAGTGCTACTGTCTGCTGCTCTAGAGCTGAGGGAGACGGACA  
CCACTCTCCCCGGTAACACTAGATTCTCAGGAATAGATAACAACCTTCCAACTGCAGC  
TGACACCAGCTGTACATTGTAACAAGACTTTTAAGATTTAGGAATGTGAGAGAGATATTA  
CCACAGCAGTTACATCACATCTGCTTACAGTCTGGCTGTTCTTGGAGCCAGAAATCCA  
GGCCTGTTCCAGGGTGTCCAATTGAGCTGTGTCCTTGACCTGCCTCGAGGCAGCTGAAGC  
[C, A]  
AGCTTGCCCTGACCTCCAGGAGTAGCTGTTGCAGGCAGGCAGCTTAGCTCAAAATGAGAG  
AAACTATGGCTAATTTAAACAAAAATGAAAATAATTTTAAAAAGGATATTGGATAGCTAC  
CAATCCTTGGGATGGTTGGAAACCCAACTGGGAAGGTACCTTGTAAAAACAATGACC  
AAATCACACCATGGAAGTGGTCCCGAGGAAGCCACTGCTGTGTCTGCCCCGGGCATATAC  
AGGGCGGTGGCCCTGGATGCTGTGCAAGAACCATCCTTGTGACTGCTCCTGGAGTGGG

FIGURE 3ZZZZ



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Inventors: GUEGLER et al.  
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122606 CTGTCTCTGGAGCCAGAATTCCAGGCCTGTTCCAGGGTGTCGAATTGAGCTGTGCCTT  
GACCTGCCTCGAGGCAGCTGAAGCCAGCTTGCCCTGACCTCCAGGAGTAGCTGTTGCAGG  
CAGGCAGCTTAGCTCAAAATGAGAGAACTATGGCTAATTTAAACAAAATGAAAATAAT  
TTTAAAAAGGATATTGGATAGCTACCAAATCCTTGGGATGGTTGGAAACCCAACTGGGA  
AGGTACCTTGTTAAAAACAATGACCAAATCACACCATGGAACCTGGTCCCGGAGGAAGCCA  
[C, T]  
TGCTGTGTCTGCCCGGGCATATACAGGGCGGTGGCCCTGGATGCTGCTGCAAGAACCAT  
CCTTGCTGACTGCTCCTGGAGTGGGGCATACCAACATTGGTACCACCATCCCTGGAATGGC  
TTCCACAGGGTCCCTGTTTCTTTATATAACATCCAAGATATGTCTGCTCCTGCCTGCCAC  
CCCACCTCCCATGGAAGCTCCCCGCTGATGCTTTCACTTCCATCTTGATCAAGGGCAAGG  
TTTACCTTCCATGCCACCCCACTCAGGGTTCCAGTCCCTCACCTCTGTCTGGAGGACCT

122767 AAACAAAATGAAAATAATTTTAAAAAGGATATTGGATAGCTACCAAATCCTTGGGATGG  
TTGGAAACCCAACTGGGAAGGTACCTTGTTAAAAACAATGACCAAATCACACCATGGAA  
CTGGTCCCGGAGGAAGCCACTGCTGTGTCTGCCCGGCATATACAGGGCGGTGGCCCTG  
GATGCTGCTGCAAGAACCATCCTTGACTGCTCCTGGAGTGGGGCATACCAACATTGGT  
ACCACCATCCCTGGAATGGCTTCCACAGGGTCCCTGTTTCTTTATATAACATCCAAGATA  
[T, C]  
GTCTGCTCCTGCCTGCCACCCACCTCCCATGGAAGCTCCCCGCTGATGCTTTCACTTCC  
ATCTTGATCAAGGGCAAGGTTTACCTTCCATGCCACCCCACTCAGGGTCCAGTCCCTC  
ACCCTCTGTCTGGAGGACCTAGGAGGATCCAGGACTCTTGAGAGCTGGGCTGTGCACAGG  
GGTGAATCACCAGCAGAAAGCTCTGCATCTAGTCTCTTCTCTTGCCTCCAGACTGGAC  
GTTTGTCTTCCACCAACCCACCCCGCAACCGGAAGACTCTAGGAAGATCTCGTCCCTC

122957 CAAGAACCATCCTTGACTGCTCCTGGAGTGGGGCATACCAACATTGGTACCACCATCC  
CTGGAATGGCTTCCACAGGGTCCCTGTTTCTTTATATAACATCCAAGATATGTCTGCTCC  
TGCTTGCCACCCACCTCCCATGGAAGCTCCCCGCTGATGCTTTCACTTCCATCTTGATC  
AAGGGCAAGGTTTACCTTCCATGCCACCCCACTCAGGGTCCAGTCCCTCACCTCTGT  
CGGAGGACCTAGGAGGATCCAGGACTCTTGAGAGCTGGGCTGTGCACAGGTGGTGAATCA  
[C, A]  
CAGCAGAAAGCTCTGCATCTAGTCTCTTCTCTTGGCCTCCAGACTGGACGTTTTGCTTC  
CCACCACCCACCCCGCAACCGGAAGACTCTAGGAAGATCTCGTCCCTCCCACTGTACT  
TTTGCTCCAGGCTGAGTGGCCATTCCGCCTTCTCTGTCTGTGTTCTTAACCCGGTCTT  
GCCTACTGTCTGGAAGAGGAGAAAGTGGTCTGTAAAGTCTGCCTCTGAGAATCTCCACAC  
CTCTTTTCAGAATGGTCTGGGGAGTGGCGGGTGCCAGTGAGACGAAAGAGGAGGACGGAG

122963 CCATCCTTGACTGCTCCTGGAGTGGGGCATACCAACATTGGTACCACCATCCCTGGAA  
TGGCTTCCACAGGGTCCCTGTTTCTTTATATAACATCCAAGATATGTCTGCTCCTGCCTG  
CCACCCACCTCCCATGGAAGCTCCCCGCTGATGCTTTCACTTCCATCTTGATCAAGGGC  
AAGGTTTACCTTCCATGCCACCCCACTCAGGGTCCAGTCCCTCACCTCTGTCTGGAGG  
ACCTAGGAGGATCCAGGACTCTTGAGAGCTGGGCTGTGCACAGGTGGTGAATCACCAGCA  
[G, A]  
AAAGCTCTGCATCTAGTCTCTTCTCTTGGCCTCCAGACTGGACGTTTTGCTTCCCACCA  
CCCACCCCGCAACCGGAAGACTCTAGGAAGATCTCGTCCCTCCCACTGTACTTTTGCT  
CCAGGCTGAGTGGCCATTCCGCCTTCTCTGTCTGTGTTCTTAACCCGGTCTTGCTTAC  
TGTCTGGAAGAGGAGAAAGTGGTCTGTAAAGTCTGCCTCTGAGAATCTCCACACCTTTT  
TCAGAATGGTCTGGGGAGTGGCGGGTGCCAGTGAGACGAAAGAGGAGGACGGAGGACAGA

124458 CTTTTTTGAGACGTAGTCTCACTCTGTTGCCAGGATGGAGTGACGTTACATGATCTCGG  
CTCACTGCAAGCTCTGCCTCCCGGGTTCAAGCGATTCCCCTGCCTCAGCCTCCCAAGTAG  
CTGGGATTACAGGTACCTGCCACCACCTGGCTGATTTTTGTGTTTTTAGTAGAGACAG  
GGTTTACCATATTGCCAGGCTGGTCTCGAACTCCTGACCTCAAGTGATCCACCTACCT  
CTCGGCCTCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGTGCCTGGCCAGTGAGT  
[C, G]  
CTTCTAAGCAAATCCATTCTAATCAAATGAAGGAACAGTGCTCCTCTTTAATAATCATAA  
ATAAGTGATAGATGAATAAGGAAATGAATCATGTATGCATTTATTTGTCCACAACACACA  
ATTGGAGCTGGCATTCTCTGGAGGCATTTGTATAAACTTAGATGAGATCACGTCCCCTA  
GGATGTCAAGGTACTTGCCCTGATTCTGCCATGAGGCCTCCAATGGAACTTTGTAGGA  
GTAGAAAACAGCCAATGTATGTGAAGTCCAAGTTCATTGGCACCTCCCTAGCCTCCTTGC

FIGURE 3AAAAA



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125449 AGCTTGAAAAATATGCTAAAGGAATTTTCTCATTGTAGGTGTTCCGTGCCAGTTCCCTT  
AGTGCAGGCCTTCCAGTGTAGGGTTTATTTCTGCATGACTTTCTATAAAGCTGTATTTCT  
CTTCTTATCTAACTTCTCGTTCCTAGTCTAACTAGAAAGTTCATGCATATCCCTTTCTCC  
CTTCTCTCCATTTTCTTTTATCTCTGAAACAATTAGGTACACACGTAGCTGGGAAGCCT  
TCTTGATGCCTCCAGAAAAATTCTAGATCCCTCAAACATTGTTCTATCTCTTCTTTCT  
[G, A]  
TACCCCAATTTTTTCTCAATTATGCTCTTAAATTATCCTTCTGAAAGATTTTCTAATTT  
TGTTGCTTCTTGTTGCCTTTTTCTCTTAGTTCACACACCTTTCTGTAAAGATTTCT  
TAATGCTTATTTTATTATTATTTATAGTTTTATGTGGACAAGCATCCCTAGATGCTTACA  
TTAAAGTATTTGTCTAAAAAAGAAGGAAGGAAGGAAGGAAGGAAGGAAGGAAGGAAG  
AAAGAAAGAGAGATAAATATGGAAGAAAGAGAAAAAAGGAAGAAAGGAAGAAAGAAAG

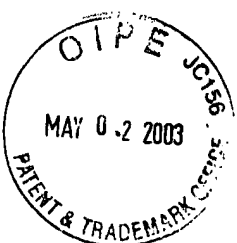
126753 AACATGTCTTCCTTCCGGGTGAACATTACAAAGCTAAAGAAGGGAACCTCACCTTCCCTTG  
AGGAGAGCTTGCCTGAACACCAGAGGATTTACCTCTTTCCCCCTTCATAATGGAATAATC  
ACTGAGCTTTCTGTCTAGAAATAAAAAAATCATGGGCCGGGCACGGTGGCTCACGCCTGTAA  
TCCAGCACTTTGGCAGACCGAGGCGGGTGGATCACTTGAGGTGAGGAGTTCAAGACCAG  
CATGGCCAACATGGCGAAACCCCATCTCTACTAAAAATACAATCATAGCTGGGCGTGGC  
[G, A]  
GTGCGCTCCTGTAATCTCAGCTACTCGGGAGGCTGAGGCAGGAGAATCGCTTGAACCTGG  
GAGGCGGAAGTTGCAGTGAGCTGAGTTTGCGCCACTGCACTCCAGCCTGGGCGACAAAGT  
GAGACTCTGCCTCAAAAAATAAAAAATAAAAAATAAAAAATAAAAAATAAAAAATAAA  
TAAAAATAAAAAATAAAAAATAAGACAAAGGAGATGATAAATTAAAGCCTAACATTACTA  
TATTCCTTTTACTGAAGAATATGGTTTATATCTGTGGAAGATGAGTTTCCTAATACA

126957 CGGGTGGATCACTTGAGGTGAGGAGTTCAAGACCAGCATGGCCAACATGGCGAAACCCCA  
TCTCTACTAAAAATACAATCATTAGCTGGGCGTGGCAGTGCGCTCCTGTAATCTCAGCTA  
CTCGGAGGCTGAGGCAGGAGAATCGCTTGAACCTGGGAGGCGGAAGTTGCAGTGAGCTG  
AGTTTGCGCCACTGCACTCCAGCCTGGGCGACAAAGTGAGACTCTGCCTCAAAAAATAA  
AATAAAAAATAAAAAATAAAAAATAAAAAATAAAAAATAAAAAATAAAAAATAAA  
[-, T, G]  
ACAAAGGAGATGATAAATTAAAGCCTAACATTACTATATTCCCTTTTACTGAAGAATAT  
GGTTTATATCTGTGAAAGATGAGTTTCTTAATACAACCTCAGAATTAGATAGGAGATCA  
CAAGGGGTAACCTCCCAAAAGGAAGGGGAGAGGAAGGGGCTGGGTTAACAGTTCTGGGTC  
AGAATAAGAGTTGAGTGGCCATGTGTATTGCAGCAGGTGGAGCTCCCTATACAAGGAAAG  
CACTGGGGCGGAAAAATGAGCATTTATCCTATTAGAATGGTCTTGTGCCTTCACTCCCTGT

126962 GGATCACTTGAGGTGAGGAGTTCAAGACCAGCATGGCCAACATGGCGAAACCCCATCTCT  
ACTAAAAATACAATCATTAGCTGGGCGTGGCAGTGCGCTCCTGTAATCTCAGCTACTCGG  
GAGGCTGAGGCAGGAGAATCGCTTGAACCTGGGAGGCGGAAGTTGCAGTGAGCTGAGTTT  
GCGCCACTGCACTCCAGCCTGGGCGACAAAGTGAGACTCTGCCTCAAAAAATAAAAAATA  
AATAAAAAATAAAAAATAAAAAATAAAAAATAAAAAATAAAAAATAAGACAA  
[A, -]  
GGAGATGATAAATTAAAGCCTAACATTACTATATTCCCTTTTACTGAAGAATATGGTTT  
ATATCTGTGGAAGATGAGTTTCTTAATACAACCTCAGAATTAGATAGGAGATCACAAGG  
GGTAACTCCCAAAAGGAAGGGGAGAGGAAGGGGCTGGGTTAACAGTTCTGGGTCAGAAT  
AAGAGTTGAGTGGCCATGTGTATTGCAGCAGGTGGAGCTCCCTATACAAGGAAAGCACTG  
GGGCGGAAATGAGCATTTATCCTATTAGAATGGTCTTGTGCCTTCACTCCCTGTGCACT

128567 TTAGTCGGAGTCTCTCTCTGTTGCCAGGCTGGAGTGCAAGTGGTCAATCTTGGCTCGCT  
GCAACCTCTGCCTCCCGGGTTCAAGTGATTCTCCCTGCCTCAGTCTCCTAAGTAGCTGGG  
ATTACAGACATCTGCCACCATGCCAGCTAATTTTGTATTTTTTAGTAGAGTTGGGGTT  
TCCCATGTTGGCCAGGCAGGTCTTGAACCTCCTGACCTCAGCCTCCTGAAGAGCTGGGAT  
TACAGGTGTGAGCCAGCATGCCTGGCCTGAGTTTTTATTATTGTGAATTTTATTTTTTT  
[T, -, C]  
CATCCAGATGCACCTATATTGGTAGTCTAGTGATAAAAAACAATTTACCCATATATACCA  
ACATCTTTTTCAAGAACTTTGCATAGTGAAACCAGCAAAGTACTGAACTGGCCAGTCTGT  
CATAGGTGTCTTGCAACATGACTCAGAGTCAGAAGCTGGATATAAACTTTTTTCTGTGTG  
TGTATATATGATCCATTTGTGTATTCGGCTTTTGAGTGGGACTTTTTCAGTAGGCTTCTT  
GAAGGTTCCACTTCACTATTCTCACTGATGTGTGCTTACAGCATCTCTGCCATGGAGATT

FIGURE 3BBBBB



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Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

128567 TTAGTCGGAGTCTCTCTGTGTGCCAGGCTGGAGTGCAGTGGTCAATCTTGGCTCGCT  
GCAACCTCTGCCTCCCGGGTTCAAGTGATTCTCCCTGCCTCAGTCTCCTAAGTAGCTGGG  
ATTACAGACATCTGCCACCATGCCAGCTAATTTTGTATTTTGTAGTAGAGTTGGGGTT  
TCCCATGTGTGGCCAGGCAGGTCTTGAACCTCTGACCTCAGCCTCCTGAAGAGCTGGGAT  
TACAGGTGTGAGCCAGCATGCCTGGCCTGAGTTTTATTATTTGTGAATTTTATTTT  
[T, -, C]  
CATCCCAGATGCACCTATATTGGTAGTCTAGTGATAAAAAACAATTTACCCATATATACCA  
ACATCTTTTTCAAGAACTTTGCATAGTGAAACCAGCAAAGTACTGAACTGGCCAGTCTGT  
CATAGGTGTCTTGCACATGACTCAGAGTCAGAAGCTGGATATAAACTTTTTCTGTGTG  
TGTATATATGATCCATTTGTGTATTTCGGCTTTTGTAGTGGGACTTTTTCAGTAGGCTTCTT  
GAAGGTTCCACTTCACTATTCTCACTGATGTGTGCTTACAGCATCTCTGCCATGGAGATT

128599 GAGTGCAGTGGTGCATCTTGGCTCGCTGCAACCTCTGCCTCCCGGGTTCAAGTGATTCT  
CCCTGCCTCAGTCTCCTAAGTAGCTGGGATTACAGACATCTGCCACCATGCCAGCTAAT  
TTTTGTATTTTTTAGTAGAGTTGGGGTTTCCCATGTTGGCCAGGCAGGTCTTGAACCTC  
TGACCTCAGCCTCCTGAAGAGCTGGGATTACAGGTGTGAGCCAGCATGCCTGGCCTGAGT  
TTTTATTATTTGTGAATTTTATTTTTTCCATCCCAGATGCACCTATATTGGTAGTCTAG  
[T, G]  
GATAAAAAACAATTTACCCATATATACCAACATCTTTTTCAAGAACTTTGCATAGTGAAAC  
CAGCAAAGTACTGAACTGGCCAGTCTGTGCATAGGTGTCTTGCACATGACTCAGAGTCAG  
AAGCTGGATATAAACTTTTTCTGTGTGTGTATATATGATCCATTTGTGTATTTCGGCTTT  
TGAGTGGGACTTTTTCAGTAGGCTTCTTGAAGGTTCCACTTCACTATTCTCACTGATGTG  
TGCTTACAGCATCTCTGCCATGGAGATTTTAGGCAGAGAGTGTTTAAAAGCTCTACTCAT

128843 ATTATTTGTGAATTTTATTTTTTCCATCCCAGATGCACCTATATTGGTAGTCTAGTGAT  
AAAAACAATTTACCCATATATACCAACATCTTTTTCAAGAACTTTGCATAGTGAAACCAG  
CAAAGTACTGAACTGGCCAGTCTGTGCATAGGTGTCTTGCACATGACTCAGAGTCAGAAG  
CTGGATATAAACTTTTTCTGTGTGTGTATATATGATCCATTTGTGTATTTCGGCTTTGA  
GTGGGACTTTTTTCAGTAGGCTTCTTGAAGGTTCCACTTCACTATTCTCACTGATGTGTG  
[G, A, T]  
TACAGCATCTCTGCCATGGAGATTTTAGGCAGAGAGTGTTTAAAAGCTCTACTCATAGTT  
TATAGAATTGCTAGTGCCACAAGGCCATTCAATTGTGGATGATGAAATTATTAGTTATAAG  
TGAACCTTCTAAAATAAATCTTGGGAAGAAAACATGTTATAAGAAAATGAAGTCAGTCCTC  
TTACTAGGCAGTTCCCATCATCTTTCCATTTTGAAGAAATTATCCTCAGTTCAGATGTATT  
ACTATGGTGATGTGTTTGCATTTCAACAAACCAAACCAAGCCGTAAACTGAGCTCTGCAT

130388 CGGAAGGATGATGAAAAATGGGACGGGGAGGTGGCTGAGCCTGGGGTTTTGGAAGTAGGA  
TGGAATTAATTGGAAGGCAAATAAAAAAGCTTCCAAGATTGTGAGCTGCGACTGTCTGAG  
AGCTCAAACAGAGTTGGCAAGAGGAACCAAAGGAGAATGAGGACATTTTTTGTCAATTGA  
CAATGAGGTATACAATATATCCAGGAAAGGACAACCAGCAGCGACCTCCTGAAGCTAAAC  
AGAGATTATCTTAAGCCACATATGAGGGAACATTCTCAATGGCAAAGAGAAGCATTA  
[T, C]  
CTGGGACTGTCTACGTCTAAGGAAAAATTTGAGCATTTACATTAATAATGGCCTGTAAACA  
AGCATTGAATATTAACCAGGCACTGTGCTAAGTGTTCACACTGTTTAATCTTCCAA  
CAATCCGATGAGGTGGGATTTCTTATCTCCATTTATAGAGGAAAAAACTAATGCACAG  
AGAGGTTGAGAACTTGCCTAAGGTCACTCAGCTATTTAGCAGTGGGGTTGGGATGTGTC  
TCAGGCAGTCTTTCCCTAGACTCTGTGCTCTTAACACTACTATGGTTTTTCAGCAGCAG

131191 CTTTTATAGCAAAGTATGGGTATACACATATTTTCATACACCTACACACACATACACAT  
GCAAGACGCGCATTTCTTAAGTCCCTAAAATACCCTGATAATTAAATGCTCCAAACATTC  
TCTGAGTGTGACCCTTGGATGTCTAGGAGAAGCAGCCAGGAACACACTTGTTAGCCGGG  
GCAATGAGTAGTGGTGAATGTTTACCTTGCTGATAAAGTCTCCAGTAGATGATGCAATT  
AAGATGCCACGATCTAGCCTTTGTTATACACCTCCTTGTCTGCCGTCAAACAAATCCACC  
[G, C]  
CTGTCCCTTCCCCATCTTCCCTCCTGCCATCTCCTGAAGTCCAGGAACGTCTCCAGCTTC  
CTACGTAAGTGTGAGTCTTTTGGCAACCTCAACCTCATTTAGATTGCAATTACATTCA  
CATCTTAATTTATGACTTAACAAGCATCTCACAACATTTAATTCATTTAACTTCACTA  
TGCAATTTGAGGAGGAATATTTGAGGAGGAATGGTACTCCCATTTGCCAGCAATTAGATTGA  
CTTAATGATCTATGGCGAAATCTCCTTTTGGGCTTTGAACTTTTCATACATTTCTGCAAA

FIGURE 3CCCCC



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132702 TCAGCTTAGAGTTTTTCAGCTTAGAGTCAATTCAGTGTGCGCTTCAGCACATCCAAAGA  
GAATATGACCGATGCTACCAGTCTGCTCCTGGACTCCACTGGTATGATTCTTTGCCCC  
AGTATCAGTCTAATCCCATTCTAGATGCTTTTTCTTAATGACCCAACAAGTACTCCT  
TCAGGAGCTGGCATGAGATGAGATTTGTTTGCAGAGATGTATAAAATTTCAAAGCCCCA  
AAGGAGATTTCCACACAGATCATTAAGTCCATCTAATTGTGCTCTACTACCCATTTAGA  
[C, T]  
GGGACCCTGTTATGCTAACTCCTATCCTGTCTCTGTGAGTGATACAGTCAACACACAT  
GATGATCACAGCACCAGCTCAGACAGGTGTGTTTTAAACAAAAGTGTGTTATAAATGTA  
CAGCCTCAGCAGGGAATGTGGGGCGAAGAAACACACAAATACTGGCTAGAGTCGGT  
CACAGGTGAAGATGGGGATGACTGTGTTTTCCGTTTCATCCAACATTTTGGCCTGACTC  
AGATAATTTTTTTCCAGCATATTCTGTTTGACACAAGGGAAACGGTGCAAATCCATCAC

133422 GCATTTGGGCTGCAGTCATGGAACCATGCAAGAAACATTCAAAGCATTGGCTAAGCAGGA  
TTTTTTGTTTTGTTGACCTGGTGTCCACGAACAGGCTTCAGGGAGCCTGAGAACCCTCT  
AGACCACTTGAAAAATTCTGAATGCACTTTTCTAGGAAAGAGTTCACAGCGTTTCATCAA  
TTTCTCCTCAAGCAGCCAATGACCAGAGAAAGGTTAAAAGTCACTGACACAGTACCGTTTT  
CTGTGCATCTATATCCTGAATCCAGGGTGATGCCGCTGACTTGCCTATCTTTCTCCTTTG  
[G, C]  
TCTTCTAGAAAAAGCAAGTGAGTCAGACCAAGATCCGGGTCTCTCAACCATCCTGTTC  
ATCTTGGCCGGCTGCATTGTGTTTGTGACGATCCCTGCTGTCTCTTAAAGTACATCGAG  
GGCTGGACGGCCTTGGAGTCCATTACTTTGTGTTGGTCACTCTGACCAGGTGGGCTTT  
GGTGATTTTGTGGCAGGTAAGCACCTGGGCAGGCCAGGCACCTGGGGCTCTGGCGGGA  
AATAATCTGTTGGCTGTGCTTTTCGCAATCGATAAAAGATGTTGCGGGAGAAGCAAATGA

133447 ATGCAAGAAACATTCAAAGCATTGGCTAAGCAGGATTTTTTTGTTGTTTGACCTGGTGT  
CCACGAACAGGCTTCAGGGAGCCTGAGAACCTCCTAGACCACTTGAAAAATTCTGAATGC  
ACTTTCTAGGAAAGAGTTCACAGCGTTCATCAAAATTTCTCCAAGCAGCCAATGACCAG  
AGAAAGGTTAAAAGTCACTGACACAGTACCGTTTTCTGTGCATCTATATCCTGAATCCAG  
GGTGATGCCGCTGACTTGCCTATCTTTCTCCTTTGGTCTTCTAGAAAAAGCAAGTGAGT  
[C, A]  
AGACCAAGATCCGGGTCTCTCAACCATCCTGTTCTCTTGGCCGGCTGCATTGTGTTTG  
TGACGATCCCTGCTGTCTCTTTAAGTACATCGAGGGCTGGACGGCCTTGGAGTCCATTT  
ACTTTGTGGTGGTCACTCTGACCACGGTGGGCTTTGGTGATTTTGTGGCAGGTAAGCACC  
CTGGGCAGGCCAGGCACCTGGGGCTCTGGCGGAAAAATAATCTGTTGGCTGTGCTTTTCG  
CAATCGATAAAAGATGTTGCGGGAGAAGCAAATGAAGATGACTCAGTGTCACTACTGCTG

133956 CGGGAAAAATAATCTGTTGGCTGTGCTTTTCGCAATCGATAAAAGATGTTGCGGGAGAAG  
CAAATGAAGATGACTCAGTGTCACTACTGCTGTGAAGAGGCTCATTTCAAATCCCTAGTC  
CTATGTAATATAAATACCATAGGTTTTTTCTGCTATGAAAAGAAAGCCAACCCTTCTCT  
TCTCAGGATGCTTATTTCCCTTATCGTCACACAAATTATGCAAGACTAAAGTGAATTTCT  
CATTAAATCTTGAACCTCTGAATTGAATTAACCTCTCTAATCCAATGATAAAGGCTGTG  
[T, C]  
TAGGAAGTGGCACATAGGAACTCAGATGAGATTAGCATAGAATTTGGTCTGCAGTGACC  
TGCAGGTTTCACTTCTGACTCCAGGTGAGAGCCATTGTCTCTGCAAACGTTGTCTGCTG  
ACATGCCCGAGATACAAAGCTGAGGACTTTGGTGACTATGGGGAGCTGAGAACTGCCGAGA  
GGGAATATAAGCTCATGGATTATGCAGGAGTGTATATACAAGCAATAGCCTTCTCTGTAA  
AAATAAATGTGGATGAGCTATGTTAAGGAAGTGAATAAATCATCAATTTCTATAG

134132 TCCTTCTCAGGATGCTTATTTCCCTTATCGTCACACAAATTATGCAAGACTAAAGTGAAT  
TTCTCATTAATCTTGAACCTCTGAATTGAATTAACCTCTCTAATCCAATGATAAAGGC  
TGTGTTAGGAAGTGGCACATAGGAACTCAGATGAGATTAGCATAGAATTTGGTCTGCAG  
TGACCTGCAGGTTCACTTCTGACTCCAGGTGAGAGCCATTGTCTCTGCAAACGTTGT  
CCTGCACATGCCAGATACAAAGCTGAGGACTTTGGTGACTATGGGGAGCTGAGAACTGC  
[C, T]  
CAGAGGGAATATAAGCTCATGGATTATGCAGGAGTGTATATACAAGCAATAGCCTTCTCT  
GTAAAAATAAATGTGGATGAGCTATGTTAAGGAAGTGAATAAATCATCAATTTCTAT  
CTAGGGCCAGGGAATTGCAAATGAAATGAGATTTAGTTTCATATGTGCACCAGTTTCCC  
AAAAGTGTGGTAGAAAGGTACGGATAGAAGGAAGAGGCCATCCTTCTTTTTCTAATAG  
GATAGTTCTAGATGTTTCAAGCAAGTGATCAGTTTCTACTACAAGAGTGAACACTTTGAT

FIGURE 3DDDDD



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136253

ACAGACCAATCTGGAGAATGCATGCCTGAAAAGACTGGAAGTTTATCTCTATCTTTTGGT  
AACAGTCTGCGAGTGATAGGGAAGGTTGCCCAATCATTGGAAAACGATACATTAAACAAGA  
GTTGATGGTTGCTGTGATTGACATAGTATGAACTCTACTAGAAATGTAATCAGATCATT  
GATCCTGCAGGATTGATTGCTGATTATTTTGCAGCTGACTCACTTTAGGACAGCCTTAC  
AATATTTTCGCAACTCTGTCTGGGAGCACACAGAACTCCGAATCCAGATAAGCAGCTCA  
[A, T]  
AAAGGGATACTTAGAAGGGTGTGACTGCCTGCCTTATTGTTTCTTGTTCCTACTAGCGCAC  
CCTAGTGACCATCTTTGCTGGGTAAATAGTGACTTGCAAAGGTAAATATTTACTCCAGAT  
AGCCACAGGAGAAAAGCTACAGATTTCTCTGGCGTAGCACAGAAACGAAATGAACCTCAA  
AAACCACTTACTGGTGGGGAAGCTCAGATCGTATCCTACAGCTCTAATGATGCAGGAGAG  
AGTTGTCTGAAAGGAAAAACCAAAAGCAGCTGCACCAACCGAAGGGGGCTTGGCACAGA

137206

GGGCTTGCAACCTGTTTTGCATGGCTGCCTCCAGCAGTGTCTGTAGGAAGGTTAGAATAA  
ATAGGCTAATTATTCAGAATAAATGACTGGTCCCTTCAATGGAACAGCCAGTCAATGCAA  
TCAGGCAACTGGCCAATTTGGTTTGATGGATTTTACTGTAATCCTTATTTATAAAATAA  
AGGGATTGGCCTCAAAGGTCCCTTTTAGTTCTAGTTTATGGTGACTCTAATTACTCAGCC  
TAACTGACCTTTTGGAGTAGCACTATGTAAACACCATTCTCAGTTAGCATTAAATCACT  
[G, T, A]  
TTGCTTGCAATCAAAATCCCAGTAATGCCATTAAAGCTAATTTTACTTTTACACATCCACT  
TGCTCTTAGTAAATGTATGGGTGCTTAAGATGGAATGGTTCCAAGAATTCCAAACCAT  
AGGGGGTGGTATGATTATATTGATTTTATTAAATAAATTTAGAGAAGTTTAAAGAAAA  
AACAAATGACAACCAAGGCCTGATCTGTTGCTGCTGTAGTTTCAAGTTATTCATCCTTAACGC  
TCAGGTCAAGCATTAGTAGGTCAAGTTGGCCACTGGCGTTTTTTATTTCTGGTATTAAGG

137313

CCAGTCAATGCAATCAGGCAACTGGCCAATTTGGTTTGATGGATTTTACTGTAATCCTT  
ATTTATAAAATAAAGGGATTGGCCTCAAAGGTCCCTTTTAGTTCTAGTTTATGGTGACTC  
TAATTACTCAGCCTAACTGACCTTTGGAGTAGCACTATGTAAACACCATTCTCAGTTA  
GCATTAATCACTATTGCTTGCAATCAAAATCCCAGTAATGCCATTAAAGCTAATTTTACT  
TTCACACATCCACTTGTCTCTTAGTAAATGTATGGGTGCTTAAGATGGAATGGTTCCAA  
[C, A, G]  
AATTCCAAACCATAGGGGGTGGTATGATTATATTGATTTTTATTAAATAAATTTAGAG  
AAGTTTAAGAAAAACAATGACAACCAAGGCCTGATCTGTTGCTGCTAGTTTCAAGTTAT  
TCATCCTTAACGCTCAGGTCAAGCATTAGTAGGTCAAGTTGGCCACTGGCGTTTTTTATT  
TCTGGTATTAAGGTAGTGGTCAAGAATCGAGGGAAGTAAAGCCTTAAGTTAGGCTTTTT  
TGGGTAAGGGATGGGTACCCCCCTTGCCCTCTAACCCCGGTCCACCTTGTAACACAGCAA

137335

TGGCCAATTTGGTTTGATGGATTTTACTGTAATCCTTATTTATAAAATAAAGGGATTGG  
CCTCAAAGGTCCCTTTTAGTTCTAGTTTATGGTGACTCTAATTACTCAGCCTAACTGACC  
CTTTGGAGTAGCACTATGTAAACACCATTCTCAGTTAGCATTAAATCACTATTGCTTGC  
ATCAAAATCCCAGTAATGCCATTAAAGCTAATTTTACTTTTACACATCCACTTGTCTCTT  
AGTAAATGTATGGGTGCTTAAGATGGAATGGTTCCAAGAATTCCAAACCATAGGGGGTG  
[G, A]  
TATGATTATATTGATTTTTATTAAATAAATTTAGAGAAGTTTAAAGAAAAACAATGAC  
AACCAGGCCTGATCTGTTGCTGCTAGTTTCAAGTTATTCATCCTTAACGCTCAGGTCAA  
GCATTAGTAGGTCAAGTTGGCCACTGGCGTTTTTTATTTCTGGTATTAAGGTTAGTGGTC  
AAGAATCGAGGGAAGTAAAGCCTTAAGTTAGGCTTTTTTGGGTAAGGGATGGGTACCCCC  
CTTGCCCTCTAACCCCGGTCCACCTTGTAACACAGCAAACCTAACAGCTGAGTGTAAACA

137951

TTCACTACATGGAATGGAATATGTGTTCTCTGCAAAGACCATATGCTAGATCATGGTTAA  
AGTAACATTTGGTTGTTTTTCAAGGGGAAACGCTGGCATCAATTATCGGGAGTGGTATAAG  
CCCCTAGTGTGGTTTGGATCCTTGTGGCCTTGCCCTACTTTGCAGCTGTCCTCAGTATG  
ATCCGAGATTGGCTACGGGTTCTGTCCAAAAAGACAAAAGAAGAGGTAGGACCCCTTCT  
AACCCATATGAATGTTCTGAGAACAGATGAGCTTGTGTCCAGAATTGCCTGTCTCTGTCC  
[T, C]  
GTGGGCTGGAGTGTCTGCTCGGTTTTTGCAGGGGGAGCGGGGGCGGGTCATAGGCTT  
CCTCATGTTGAATCAGTCTTCAAAGCTAAGGAGAATAGAATACAGTTATTTCTGGATTCT  
TTTTTTTGGCAGGTGAGAAAATATGGTGATTCTGTTTACCAGCCCATAAATCCTGGAAAAA  
CTAGTAAACAACAGCTGATTTTTAAAAAATGAAAATGAAAATAAATAGGAGAGGTAGACT  
ATGGCTGAGTGTGTGTGGGGGGGTGCAGCCTGTCTTCCGGTCTCAGGGTCTGTGCAG

FIGURE 3EEEE



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138206

CCTGAGAACAGATGAGCTTGTGTCCAGAATTGCCTGTCTCTGTCTGTGGGCTGGAGTGT  
TTCTGGCTCGGTTTTGCAGGGGGAGCGGGGGCGGGTCATAGGCTTCCTCATGTTGAATC  
AGTCCTTCAAAGCTAAGGAGAATAGAATACAGTTATTTCTGGATTCTTTTTTGGCAGGT  
GAGAAAATATGGTGATTTCGTTTACCAGCCCATAAATCCTGGA AAAA ACTAGTAAACAACAG  
CTGATTTTAAAAAATGAAAATGAAAATAAATAGGAGAGGTAGACTATGGCTGAGTGTGT  
[G, C]  
TGTGGGGGGGTGCAGCCTGTCTCTCCGGTCTCAGGGTCTGTGCAGAAAGGCAGTTGAACG  
CCAAGAATCTTTCTGATTTCAGTAAGAAACTGAAATCATCGAACATTGACCAGCTACGGG  
GAAGTGAGCCCAATGGGCCTCTTTCACTTATCCCTCTTGGTTGTACATCCATAGAGAC  
AAATATACATCCCTGAGGAAGGGCCGTGCATGTAACCTTACATGAAGGGAAGTAAAGGAA  
GACATATGAAGGAAAGATAGATTTTGTGATTAAAAATAAATATTTCATGTAGCTCTCTTA

138207

CTGAGAACAGATGAGCTTGTGTCCAGAATTGCCTGTCTCTGTCTGTGGGCTGGAGTGT  
TCTGGCTCGGTTTTGCAGGGGGAGCGGGGGCGGGTCATAGGCTTCCTCATGTTGAATCA  
GTCCCTTCAAAGCTAAGGAGAATAGAATACAGTTATTTCTGGATTCTTTTTTGGCAGGTG  
AGAAAATATGGTGATTTCGTTTACCAGCCCATAAATCCTGGA AAAA ACTAGTAAACAACAGC  
TGATTTTAAAAAATGAAAATGAAAATAAATAGGAGAGGTAGACTATGGCTGAGTGTGTG  
[T, G]  
GTGGGGGGGTGCAGCCTGTCTCTCCGGTCTCAGGGTCTGTGCAGAAAGGCAGTTGAACGC  
CAAGAATCTTTCTGATTTCAGTAAGAAACTGAAATCATCGAACATTGACCAGCTACGGGG  
AAGTGAGCCCAATGGGCCTCTTTCACTTATCCCTCTTGGTTGTACATCCATAGAGACA  
AATATACATCCCTGAGGAAGGGCCGTGCATGTAACCTTACATGAAGGGAAGTAAAGGAAG  
ACATATGAAGGAAAGATAGATTTTGTGATTAAAAATAAATATTTCATGTAGCTCTCTTAG

138210

AGAACAGATGAGCTTGTGTCCAGAATTGCCTGTCTCTGTCTGTGGGCTGGAGTGT  
GGCTCGGTTTTGCAGGGGGAGCGGGGGCGGGTCATAGGCTTCCTCATGTTGAATCAGTC  
CTTCAAAGCTAAGGAGAATAGAATACAGTTATTTCTGGATTCTTTTTTGGCAGGTGAGA  
AAATATGGTGATTTCGTTTACCAGCCCATAAATCCTGGA AAAA ACTAGTAAACAACAGCTGA  
TTTTTAAAAAATGAAAATGAAAATAAATAGGAGAGGTAGACTATGGCTGAGTGTGTGTG  
[-, G]  
GGGGGGGTGCAGCCTGTCTCTCCGGTCTCAGGGTCTGTGCAGAAAGGCAGTTGAACGCCAA  
GAATCTTTCTGATTTCAGTAAGAAACTGAAATCATCGAACATTGACCAGCTACGGGGGAAG  
TGAGCCCAATGGGCCTCTTTCACTTATCCCTCTTGGTTGTACATCCATAGAGACAAAT  
ATACATCCCTGAGGAAGGGCCGTGCATGTAACCTTACATGAAGGGAAGTAAAGGAAGACA  
TATGAAGGAAAGATAGATTTTGTGATTAAAAATAAATATTTCATGTAGCTCTCTTAGGAA

138805

TAGGAAGAGAGGAAAAAGAAAGGAGGAAGGCCAAGGAAGGAGAAAAAAGAGCTAAAAGA  
AAGGAAGGGAGATAAGAAAAACCAAAGAAATAGAGGGCCAGCCTCTGTTTGCTTCATTCT  
GTATAAAAGGCCCCAGGAGAAAGTTGCTGAATGGAGAGATTTCCACATCAGTTTCTTGG  
GCCCATATGCTAATTTTCTGGTTTATATAAGTAAGCCAGGAAAGTAAGCAATGCAATTT  
CCAGACCGGTTCCCAGACAGCTAACTGACCTGCTGAAAATCAGCTATAACAAAGAGAA  
[G, C]  
GGAACAACATGAATATTGACTTTCTGGATGCACAAATTTGAGTTCTTCATTGTCAGAGG  
GAAGCATGGGACTTATACTGTCTGCCCTGTTTATTAAGAGCCAAGAAATTTGGTGCTGAT  
CCTCAGGCAAAACTCCACTCTAAGGAGGCCTGTTCTGTGGGCTTTGGCAGAATAGGCCGT  
CTTCTGACCCCTGACTGGGGGAAGTGGGTTACCAGGTGCCCTGGAGCATCTTCTTAAAC  
CAGGGAAAGCCCCACAGCACATGACCATAGCATGGCCAGATAGGGTGGCCACCCATCCC

140339

ACCTCCAGACTCACCAAGAGGAAAAACAAGGACCTCAAAAAGACCTTGCCCGAGGACGTT  
CAGAAAATCTACAAGACCTTCCGGAATTACTCCCTGGACGAGGAGAAGAAAGAGGAGGAG  
ACGGAAGAGATGTGTAACCTCAGACAACTCCAGCACAGCCATGCTGACGGACTGTATCCAG  
CAGCACGCTGAGTTGGAGAACGGAATGATACCCACGGACACCAAAGACCGGGAGCCGGAG  
AAACAACCTATTACTTGAAGACAGAACTAAATGTGAAGGACATTGGTCTTGGACTGAGCG  
[-, T]  
TGT  
CTTTTGTAGTCCAAAATTACATAGCATTGAAGAATATATTTCACTGTGCCATAAACAACTG  
AAAGCTTGCTCTGCCAAAAGGAATCAGAGAACAAGAACTTCATTTTCAGATAGCAAACGCA  
GGACACACCAAGAGTGTCCGTGCACGTAGCCGTTCTGGCCGTACATGTTAAGGGCATTT  
CAGTGGCAGTGCTGTACCCCTGGGCAGTGCTACCTGGGCACACACGTAGACAAGGGCAGC

FIGURE 3FFFFF





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140340

CCTCCAGACTCACCAAGAGGAAAAACAAGGACCTCAAAAAGACCTTGCCCGAGGACGTTT  
AGAAAATCTACAAGACCTTCCGGAATTACTCCCTGGACGAGGAGAAGAAAGAGGAGGAGA  
CGGAAAAGATGTGTAACCTCAGACAACCTCCAGCACAGCCATGCTGACGGACTGTATCCAGC  
AGCACGCTGAGTTGGAGAACGGAATGATACCCACGGACACCAAAGACCGGGAGCCGGAGA  
ACAACTCATTACTTGAAGACAGAACTAAATGTGAAGGACATTGGTCTTGACTGAGCGT  
[-, G, T]  
GT  
TTTTTAGTCCAAAATTACATAGCATTGAAGAATATATTTCACTGTGCCATAAAACAATGA  
AAGCTTGCTCTGCCAAAAGGAATCAGAGAACAAGAACTTCATTTAGATAGCAAACGCAG  
GACACACCAAGAGTGTCCGTGCACGTAGCCGGTTCTGGCCGTACATGTTAAGGGCATTTC  
AGTGGCAGTGCTGTACCCCTGGGCAGTGCTACCTGGGCACACACGTAGACAAGGGCAGCT

140360

AAAAACAAGGACCTCAAAAAGACCTTGCCCGAGGACGTTTCAAAAATCTACAAGACCTTC  
CGGAATTACTCCCTGGACGAGGAGAAGAAAGAGGAGGAGACGGAAAAGATGTGTAACCTCA  
GACAACTCCAGCACAGCCATGCTGACGGACTGTATCCAGCAGCACGCTGAGTTGGAGAAC  
GGAATGATACCCACGGACACCAAAGACCGGGAGCCGGAGAACAACCTCATTACTTGAAGAC  
AGAACTAAATGTGAAGGACATTGGTCTTGACTGAGCGTTGTGTGTGTGTGTGTGTGTGT  
[-, T]  
GTTTTTAATATTCACACTGAGACATGTGCCTTAAACAGACTTTTTTAGTCCAAAATTACAT  
AGCATTGAAGAATATATTTCACTGTGCCATAAAACAACCTGAAAGCTTGCTCTGCCAAAAGG  
AATCAGAGAACAAGAACTTCATTTAGATAGCAAACGCAGGACACACCAAGAGTGTCCGT  
GCACGTAGCCCGTTCTGGCCGTACATGTTAAGGGCATTTCAGTGGCAGTGCTGTACCCCT  
GGGCAGTGCTACCTGGGCACACACGTAGACAAGGGCAGCTATTCTTAGACCAGCCTCCT

140366

AAGGACCTCAAAAAGACCTTGCCCGAGGACGTTTCAAAAATCTACAAGACCTTCCGGAAT  
TACTCCCTGGACGAGGAGAAGAAAGAGGAGGAGACGGAAAAGATGTGTAACCTCAGACAAC  
TCCAGCACAGCCATGCTGACGGACTGTATCCAGCAGCACGCTGAGTTGGAGAACGGAATG  
ATACCCACGGACACCAAAGACCGGGAGCCGGAGAACAACCTCATTACTTGAAGACAGAAAC  
TAAATGTGAAGGACATTGGTCTTGACTGAGCGTTGTGTGTGTGTGTGTGTGTGTGTGT  
[T, -]  
AATATTCACACTGAGACATGTGCCTTAAACAGACTTTTTAGTCCAAAATTACATAGCATT  
GAAGAATATATTTCACTGTGCCATAAAACAACCTGAAAGCTTGCTCTGCCAAAAGGAATCAG  
AGAACAAGAACTTCATTTAGATAGCAAACGCAGGACACACCAAGAGTGTCCGTGCACGT  
AGCCCGTTCTGGCCGTACATGTTAAGGGCATTTCAGTGGCAGTGCTGTACCCCTGGGCAG  
TGCTACCTGGGCACACACGTAGACAAGGGCAGCTATTCTTAGACCAGCCTCCTGAAAGA

141183

TTGGAAGCAGATCAGAGCACACGTACGAAAAGGTGCAATTGCTTTTCTCATGACAAAAGA  
AAAAAATAATCACAAACACATCAGCTGTGGATATACCTTAACCAATGACAGAAGCCT  
GCTGAGTTTGGTCTTTCTCACAGGGGTAGGTAGTCCACATGAACCTGGCGAGCAGTGGTGA  
AAACATGACATCAACTGCTGCGTGGTTAAAGGCCAATCATGCATTTTCTCAGTGGGTGC  
AATGGTGACAATAAACTGATTTGGAATGTCCATGTACTTTGGTTATAACTTGTTTTGAT  
[A, G]  
AGAGGGGTAGAAATACCAAACAATTGCCTTGATGATGCCAGTGGCTTGCTGTTCTGTCT  
TAGCTGATCCTACATTTTACAAAAGTAGACATCCTGCATTTCTGAGACACACTGAGGAG  
GACCATGGCATCTTCCATCTCAGGGCTTTTGTCCCTTGGGTGTCTTAGGGTAGACATA  
GTGATAAGATCCAATCTCGCTATCTCCAAACAAAAGAAAATGTACCCCTTGACAGTAA  
GCTTGAAATGTTTTATTGCTTGACGCGTAAGTGCCATTAATCCATTTAACAATGATAC

141545

AGCTGATCCTACATTTTACAAAAGTAGACATCCTGCATTTCTGAGACACACTGAGGAGG  
ACCATGGCATCTTCCATCTCAGGGCTTTTGTCCCTTGGGTGTCTTAGGGTAGACATAG  
TGATAAGATCCAATCTCGCTATCTCCAAACAAAAGAAAATGTACCCCTTGACAGTAA  
CTTGAAATGTTTTATTGCTTGACGCGTAAGTGCCATTAATCCATTTAACAATGATACT  
TAGAAATATTTAAATATTTTCACTTTTATGTTTGGGCATTCTTTATTCTGAAAA  
[A, T]  
GTCACCACTGCTCCTTGCTTGTGTCTTACATCTCACATCGGTTACTCAATAAACTGGAAC  
ACCTAGACTGATTGTTCCAGGCAAACGATAAGCTAACACATCATAATTATGATTGGTC  
TGTGAGGCTAGAACATCCCGCAGAGGAAAGTGGGGAATGGCTAGTCATAGGTTGCATGA  
TGATTTTAAATGGGTGTGATCAGAAAGGGGAAAATACATACTCCTGTGTATGCCTCAGT  
CTTTATCATAATTGGCTGGTTCACAGCTAGCTCTTGGGCCACACGTGAAAGCATTGGA

FIGURE 3GGGGG



Docket No.: CL000858  
Serial No.: 09/729,920  
Inventors: GUEGLER et al.  
Title: ISOLATED HUMAN TRANSPORTER...

- 142316 TTGTACCCACGACATCCTCAACCACTGGTACCATGGAAGACCTGTCCCTGCCCATTCTC  
AAAAATGCACAGCTCTTCCCTGCCTGGAGCACATGAAGTCCCATCTCCCTGTCCCAGAC  
CTTTAGGCTCTGTGAAGTTCTGGCATTGCTTATGAGACCTTCCCTGTCCAAGGAAGGTC  
TAAGTCAACTCCTCCATTGGACTGGAGATGAGGCTCACTGGTGACATCCTGTGTCGACTC  
AGTAATAAATAGTCACTTGGGAGGCGATGTTTATGCAGGTGTGGATGTTGAGTTTACTA  
[C, T]  
GGGAATCATTCCAGCCTGACAAAATGTGTTTTAAGGAATAGGTAGATAACTGGGACTTCC  
TCTGTTATTCTAACAGTCTGAAGCTTCCCTAATTAACTGTCCATGGATCTCACTTATTG  
GTTTCCACTCTGTGTTATCTGGTACGTTCTTTGTAGCAGTGTGTTAAAAATCCAGGCCCT  
ACGGCCAAATCTGGCAGAGGCTTCCCTCTCATTATCCAGTGCCTTCTGTGGGCCAGGCA  
CAGGATTAGGCATTTATGAACGTCAGCTCATTGAACTTCACGACACTATGTGGGAAGT
- 142436 CTTTAGGCTCTGTGAAGTTCTGGCATTGCTTATGAGACCTTCCCTGTCCAAGGAAGGTC  
TAAGTCAACTCCTCCATTGGACTGGAGATGAGGCTCACTGGTGACATCCTGTGTCGACTC  
AGTAATAAATAGTCACTTGGGAGGCGATGTTTATGCAGGTGTGGATGTTGAGTTTACTA  
TGGGAATCATTCCAGCCTGACAAAATGTGTTTTAAGGAATAGGTAGATAACTGGGACTTC  
CTCTGTTATTCTAACAGTCTGAAGCTTCCCTAATTAACTGTCCATGGATCTCACTTATT  
[T, C, G]  
GTTTCCACTCTGTGTTATCTGGTACGTTCTTTGTAGCAGTGTGTTAAAAATCCAGGCCCT  
ACGGCCAAATCTGGCAGAGGCTTCCCTCTCATTATCCAGTGCCTTCTGTGGGCCAGGCA  
CAGGATTAGGCATTTATGAACGTCAGCTCATTGAACTTCACGACACTATGTGGGAAGT  
ATTTGCAAAACCCATTATATACACAAGGACACAGAGGCTCAGGGAAGCTATGTTATTATC  
CAATGGCACACAGCAAGAAAGTGGTAGAGCTGGTATTCAAAGTCTGACCAAGTCTGCTT
- 142719 ATGGATCTCACTTATTTGGTTTTCACTCTGTGTTATCTGGTACGTTCTTTGTAGCAGTGT  
GTTAAAAATCCAGGCCCTACGGCCAAATCTGGCAGAGGCTTCCCTCTCATTATCCAGTG  
CCTTCTGTGGGCCAGGCACAGGATTAGGCATTTATGAACGTCAGCTCATTGAACTTCA  
CGACACTATGTGGGAAGTATTTGCAAACCCATTATATACACAAGGACACAGAGGCTCAGG  
GAAGCTATGTTATTTATCCAATGGCACACAGCAAGAAAGTGGTAGAGCTGGTATTCAAAG  
[G, T]  
CTGACCAAGTCTGCTTTCAACTTCACTACAGTGTCTGTGTCATGCATCCTTGTGATTGT  
GTGTGTTTGTGTGTATGTGTGCTTTCTAGCTTCACTGGACACAGCTTACAGATGTGGGGA  
GCAGATATGGTGGAAATCTCCACCACCAAGAGGGCACAAGGTCTTTGTGTAACATGGCTC  
AAAGGGTTGCCCCCTGCAGACACCTACTGTACATTTATTTGGTTTTGGAAATTTTGTATGT  
GGCACCCCTTTAAAAAATGCCCTTTGAAAGCACTCTTTGCACTTTACTTGCTAAGCTTGT
- 142779 GTTAAAAATCCAGGCCCTACGGCCAAATCTGGCAGAGGCTTCCCTCTCATTATCCAGTG  
CCTTCTGTGGGCCAGGCACAGGATTAGGCATTTATGAACGTCAGCTCATTGAACTTCA  
CGACACTATGTGGGAAGTATTTGCAAACCCATTATATACACAAGGACACAGAGGCTCAGG  
GAAGCTATGTTATTTATCCAATGGCACACAGCAAGAAAGTGGTAGAGCTGGTATTCAAAG  
TCTGACCAAGTCTGCTTTCAACTTCACTACAGTGTCTGTGTCATGCATCCTTGTGATTG  
[T, C]  
GTGTGTTTGTGTGTATGTGTGCTTTCTAGCTTCACTGGACACAGCTTACAGATGTGGGGA  
GCAGATATGGTGGAAATCTCCACCACCAAGAGGGCACAAGGTCTTTGTGTAACATGGCTC  
AAAGGGTTGCCCCCTGCAGACACCTACTGTACATTTATTTGGTTTTGGAAATTTTGTATGT  
GGCACCCCTTTAAAAAATGCCCTTTGAAAGCACTCTTTGCACTTTACTTGCTAAGCTTGT  
AGAAACTCTGCATACAGCAGGAATAAAATAGTTCAAAGCACTAAGCTGCATACTTACCA
- 142931 TATATACACAAGGACACAGAGGCTCAGGGAAGCTATGTTATTTATCCAATGGCACACAGC  
AAGAAAGTGGTAGAGCTGGTATTCAAAGTCTGACCAAGTCTGCTTTCAACTTCACTACA  
GTGTCTGTGTCATGCATCCTTGTGATTGTGTGTTTGTGTGTATGTGTGCTTTCTAGC  
TTCATGGACACAGCTTACAGATGTGGGAGCAGATATGGTGGAAATCTCCACCACCAAGAG  
GGCACAAAGGTCTTTGTGTAACATGGCTCAAAGGGTTGCCCCCTGCAGACACCTACTGTAC  
[A, C]  
TTTATTTGGTTTTTGGAAATTTTGTATGTGGCACCCCTTTAAAAAATGCCCTTTGAAAGCAC  
TCTTTTGCATTTACTTGCTAAGCTTTGTAGAACTCTGCATACAGCAGGAATAAAATAGT  
TCAAAGCACTAAGCTGCATACTTACCAATGGAACAGGTGCATGTGTTGGTATGTGCAT  
AGATGCTTCCCCAAATGAGTCAAATCAGTCACACAGAGGGATCAAACATAACCTTGGGCT  
GGGGGTGGGAAAATTTTCTACATAACCCATTCCCTGAGACATTTGGCCAAGAATGTGATG

FIGURE 3HHHHH